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55TH CONGRESS, 2d Session. } SENATE. { DOCUMENT No. 207.

MESSAGE

FROM THE

PRESIDENT OF THE UNITED STATES,

TRANSMITTING

THE REPORT OF THE NAVAL COURT OF INQUIRY UPON THE DESTRUCTION OF THE UNITED STATES BATTLE SHIP MAINE IN HAVANA HARBOR, FEBRUARY 15, 1898, TOGETHER WITH THE TESTIMONY TAKEN BEFORE THE COURT.

MARCH 28, 1898.—Read, referred to the Committee on Foreign Relations, and ordered to be printed.

WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1898.

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JUL 17 1900

MESSAGE.

To the Congress of the United States:

For some time prior to the visit of the *Maine* to Havana Harbor our consular representatives pointed out the advantages to flow from the visit of national ships to the Cuban waters, in accustoming the people to the presence of our flag as the symbol of good will and of our ships in the fulfillment of the mission of protection to American interests, even though no immediate need therefor might exist.

Accordingly on the 24th of January last, after conference with the Spanish minister in which the renewal of visits of our war vessels to Spanish waters was discussed and accepted, the peninsular authorities at Madrid and Havana were advised of the purpose of this Government to resume friendly naval visits at Cuban ports, and that in that view the *Maine* would forthwith call at the port of Havana.

This announcement was received by the Spanish Government with appreciation of the friendly character of the visit of the *Maine*, and with notification of intention to return the courtesy by sending Spanish ships to the principal ports of the United States. Meanwhile the *Maine* entered the port of Havana on the 25th of January, her arrival being marked with no special incident besides the exchange of customary salutes and ceremonial visits.

The *Maine* continued in the harbor of Havana during the three weeks following her arrival. No appreciable excitement attended her stay; on the contrary, a feeling of relief and confidence followed the resumption of the long interrupted friendly intercourse. So noticeable was this immediate effect of her visit that the consul-general strongly urged that the presence of our ships in Cuban waters should be kept up by retaining the *Maine* at Havana or, in the event of her recall, by sending another vessel there to take her place.

At forty minutes past 9 in the evening of the 15th of February the *Maine* was destroyed by an explosion, by which the entire forward part of the ship was utterly wrecked. In this catastrophe two officers and two hundred and sixty-four of her crew perished, those who were not killed outright by her explosion being penned between decks by the tangle of wreckage and drowned by the immediate sinking of the hull.

Prompt assistance was rendered by the neighboring vessels anchored in the harbor, aid being especially given by the boats of the Spanish

cruiser *Alfonso XII* and the Ward Line steamer *City of Washington*, which lay not far distant. The wounded were generously cared for by the authorities of Havana, the hospitals being freely opened to them, while the earliest recovered bodies of the dead were interred by the municipality in a public cemetery in the city. Tributes of grief and sympathy were offered from all official quarters of the island.

The appalling calamity fell upon the people of our country with crushing force, and for a brief time an intense excitement prevailed, which in a community less just and self-controlled than ours might have led to hasty acts of blind resentment. This spirit, however, soon gave way to the calmer processes of reason and to the resolve to investigate the facts and await material proof before forming a judgment as to the cause, the responsibility, and, if the facts warranted, the remedy due. This course necessarily recommended itself from the outset to the Executive, for only in the light of a dispassionately ascertained certainty could it determine the nature and measure of its full duty in the matter.

The usual procedure was followed, as in all cases of casualty or disaster to national vessels of any maritime State. A naval court of inquiry was at once organized, composed of officers well qualified by rank and practical experience to discharge the onerous duty imposed upon them. Aided by a strong force of wreckers and divers, the court proceeded to make a thorough investigation on the spot, employing every available means for the impartial and exact determination of the causes of the explosion. Its operations have been conducted with the utmost deliberation and judgment, and while independently pursued no attainable source of information was neglected, and the fullest opportunity was allowed for a simultaneous investigation by the Spanish authorities.

The finding of the court of inquiry was reached, after twenty-three days of continuous labor, on the 21st of March, instant, and, having been approved on the 22d by the commander in chief of the United States naval force on the North Atlantic Station, was transmitted to the Executive.

It is herewith laid before the Congress, together with the voluminous testimony taken before the court.

Its purport is, in brief, as follows:

When the *Maine* arrived at Havana she was conducted by the regular Government pilot to buoy No. 4, to which she was moored in from 5½ to 6 fathoms of water.

The state of discipline on board, and the condition of her magazines, boilers, coal bunkers, and storage compartments, are passed in review, with the conclusion that excellent order prevailed, and that no indication of any cause for an internal explosion existed in any quarter.

At 8 o'clock in the evening of February 15 everything had been reported secure, and all was quiet.

At forty minutes past 9 o'clock the vessel was suddenly destroyed.

There were two distinct explosions, with a brief interval between them.

The first lifted the forward part of the ship very perceptibly; the second, which was more open, prolonged, and of greater volume, is attributed by the court to the partial explosion of two or more of the forward magazines.

The evidence of the divers establishes that the after part of the ship was practically intact and sank in that condition a very few moments after the explosion. The forward part was completely demolished.

Upon the evidence of a concurrent external cause the finding of the court is as follows:

At frame 17 the outer shell of the ship, from a point 11½ feet from the middle line of the ship and 6 feet above the keel when in its normal position, has been forced up so as to be now about 4 feet above the surface of the water, therefore about 34 feet above where it would be had the ship sunk uninjured.

The outside bottom plating is bent into a reversed V shape (∧), the after wing of which, about 15 feet broad and 32 feet in length (from frame 17 to frame 25), is doubled back upon itself against the continuation of the same plating, extending forward.

At frame 18 the vertical keel is broken in two and the flat keel bent into an angle similar to the angle formed by the outside bottom plates. This break is now about 6 feet below the surface of the water and about 30 feet above its normal position.

In the opinion of the court this effect could have been produced only by the explosion of a mine situated under the bottom of the ship at about frame 18 and somewhat on the port side of the ship.

The conclusions of the court are:

That the loss of the *Maine* was not in any respect due to fault or negligence on the part of any of the officers or members of her crew;

That the ship was destroyed by the explosion of a submarine mine, which caused the partial explosion of two or more of her forward magazines; and

That no evidence has been obtainable fixing the responsibility for the destruction of the *Maine* upon any person or persons.

I have directed that the finding of the court of inquiry and the views of this Government thereon be communicated to the Government of Her Majesty the Queen Regent, and I do not permit myself to doubt that the sense of justice of the Spanish nation will dictate a course of action suggested by honor and the friendly relations of the two Governments.

It will be the duty of the Executive to advise the Congress of the result, and in the meantime deliberate consideration is invoked.

WILLIAM MCKINLEY.

EXECUTIVE MANSION,
March 28, 1898.

RECORD

OF THE

PROCEEDINGS OF A COURT OF INQUIRY

CONVENED

ON BOARD THE UNITED STATES LIGHT-HOUSE TENDER MANGROVE, BY VIRTUE OF A PRECEPT SIGNED BY REAR-ADMIRAL MONTGOMERY SICARD, U. S. NAVY, COMMANDER IN CHIEF, UNITED STATES NAVAL FORCE ON NORTH ATLANTIC STATION,

TO

INQUIRE INTO THE LOSS OF THE U. S. B. S. MAINE, IN THE HARBOR OF HAVANA, CUBA,

ON THE

NIGHT OF FEBRUARY FIFTEENTH, EIGHTEEN HUNDRED AND NINETY-EIGHT.

PROCEEDINGS

OF A

Court of inquiry convened on board the United States light-house tender Mangrove, by virtue of a precept signed by Rear-Admiral Montgomery Sicard, United States Navy, commander in chief United States naval force on North Atlantic Station.

FIRST DAY.

U. S. LIGHT-HOUSE TENDER MANGROVE,
Harbor of Havana, Monday, February 21, 1898—10 a. m.

The court met pursuant to the above-mentioned precept.

Present: Capt. William T. Sampson, United States Navy, president; Capt. French E. Chadwick, United States Navy, and Lieut. Commander William P. Potter, United States Navy, members; and Lieut. Commander Adolph Marix, United States Navy, judge-advocate.

The court was cleared and the orders constituting it, together with all the accompanying instructions, were read aloud and appended, marked as follows:

Precept, together with two accompanying telegrams forming a part of it, marked "A."

Letter from the convening authority to the president of the court, giving certain officers the right to be present at the investigation, marked "B."

Second letter from the convening authority to the president of the court, allowing any other persons to be present during the investigation should the evidence develop any facts which might implicate such persons, marked "C." All other matters preliminary to the inquiry were determined, and, after deciding to sit with closed doors, the court was opened.

The judge-advocate, having requested and received permission, introduced as stenographer Frederick J. Buenzle, chief yeoman, United States Navy.

Captain Sigsbee, United States Navy, commanding the U. S. battle ship *Maine*, whom the convening authority had notified of his right to be present during the investigation, appeared and requested permission to be present at such times during the investigation as he might desire, but did not want any counsel.

The judge-advocate read aloud the precept and accompanying instructions heretofore referred to.

Captain Sigsbee was asked if he objected to any member of the court, to which he replied in the negative.

The members were severally duly sworn by the judge-advocate, and the judge-advocate was duly sworn by the president, all of which oaths were administered according to law.

Chief Yeoman Frederick J. Buenzle, United States Navy, was duly sworn as stenographer by the judge-advocate.

All witnesses were directed to withdraw.

The court being duly organized, the inquiry proceeded as follows:

Capt. CHARLES D. SIGSBEE, United States Navy, a witness called by the judge-advocate, was duly sworn by the president.

EXAMINATION IN CHIEF.

By the JUDGE-ADVOCATE:

Q. What is your name, rank, and present station?

A. Charles D. Sigsbee; captain, United States Navy; commanding U. S. S. *Maine.*

Q. When did you take command of the *Maine?*

A. On the 10th day of April, 1897.

Q. When did the *Maine* arrive at Havana the last time?

A. On the 24th day of January, 1898.

Q. About what time?

A. About half-past 9 in the morning.

Q. Do you know, or have you any reason to believe, that the authorities of Havana knew of the *Maine's* coming?

A. Yes; I understand that they were notified by the United States consul-general.

Q. Upon your arrival, did you take a pilot?

A. I did; I took an official pilot sent off by the captain of the port of Havana.

Q. Did he berth the *Maine?*

A. He did.

Q. Where?

A. The berth is in the man-of-war anchorage off the Machina, or the Shears. It is to all appearances one of the regular mooring buoys of the place. My recollection is that the pilot said that it was buoy No. 4. Our bearings, taken soon after mooring, did not place it exactly according to the charted position of buoy No. 4, but no note was taken of this because it was assumed that the charted position might represent former positions, and the buoys might have been changed somewhat in the examinations of the moorings.

Q. Have you been to Havana before frequently or recently?

A. I was here about 1872, and again about 1878.

Q. Do you know if you were placed in the usual berth for men-of-war?

A. No. I can only state that by remarks I have heard since the explosion.

Q. State what you heard.

A. I have been informed, since the explosion on board the *Maine*, by Captain Stevens, who is temporarily in command of the steamer *City of Washington*, of the Ward Line of steamers, that he had never known in all his experience, which covers visits to Havana for five or six years, a man-of-war to be anchored at that buoy, and that he had rarely known merchant vessels to be anchored there, and that it was the least used buoy in the harbor.

Q. Will you please describe the surroundings when first moored to this buoy?

A. The Spanish man-of-war *Alfonso XII* was moored in the position now occupied by the *Fern*—about 250 yards to the northward and westward of the *Maine*. The German ship *Gniesenau* was anchored at the berth now occupied by the Spanish man-of-war *Segaspe*, which is about 400 yards about due north from the *Maine*. A day or two after the arrival of the *Maine* the German man-of-war *Charlotte* came in and was anchored about four or five hundred yards to the southward of the *Maine's* berth. Other vessels, merchant vessels, came and went, anchored and moored in localities more or less remote, from 200 yards upward.

Q. Will you please describe your surroundings at the time of the explosion?

A. It was a calm and still night. At the time of the accident the Spanish man-of-war *Alfonso XII* was at the berth, as before stated. The small Spanish dispatch boat *Segaspe* had come out, I think, the day before and taken the berth occupied by the Spanish man-of-war, the *Gniesenau* having left. The steamer *City of Washington* was anchored about two hundred yards to the southward and eastward of the *Maine's* stern, slightly on the port quarter. That is as much as I can give. Other vessels were remote, so far as my recollection goes.

Q. When did you coal before the last coaling?

A. We coaled at Key West within a week of the time of our arrival.

Q. How much coal did you take at that time, if you remember?

A. I think about one hundred and fifty tons.

Q. Was the coal regularly inspected?

A. My recollection is that it was. It was from the Government coal pile, and we had the usual men on shore; and while I can not now state specifically, it was our invariable custom on board the *Maine* to inspect all coal before it was brought on board.

Q. How much coal did you take in the last coaling previous to this, and where?

A. It was at Key West, and I think in the neighborhood of 300 tons.

Q. Into what bunkers was the coal placed at these coalings?

A. Generally in the forward bunkers, because it was customary to use coal from the forward bunkers first. These bunkers naturally, therefore, were replenished with new coal.

Q. There is a peculiar bunker under the forward turret, abreast the 10-inch magazine. Do you know when that was last emptied?

A. I can not personally recollect that particular bunker.

Q. Did you ever receive any report from the chief engineer of your ship that any coal had been too long in any bunker?

A. Never that I can recollect.

Q. Did the fire-alarms in the bunkers work?

A. They were sensitive. They worked occasionally when there was no undue heat in the bunkers, on which occasions we invariably examined the bunkers and got a report.

Q. Regarding inflammables and paints on board the *Maine*, were the regulations strictly carried out in regard to the stowage?

A. Strictly, so far as my knowledge and my orders were concerned. I was very particular on points of that kind. I was especially particular in my directions to the chief engineer concerning the disposition of waste which had been used. He had informed me that it was always kept in a covered metal bucket until thrown overboard with the ashes. He has since informed me that it was habitual to throw it overboard every day with the ashes.

Q. How often did you discharge ashes in Havana?

A. I can not now recollect; but I remember giving certain directions

in connection with hired lighters and not dumping in the harbor. The chief engineer was generally very solicitous about getting ashes out of the ship promptly.

Q. Where were ashes kept until discharged?

A. Those that I saw were dumped about the region of the bulkhead between the two fire rooms. There was a passage out of the forward part of the forward fire room which would have been blocked by ashes.

Q. Regarding paints and inflammables, was there not a paint room well forward below the berth deck?

A. The paint room was in what is called the eyes of the ship, just below the berth deck, the extreme forward compartment.

Q. What were the regulations in regard to that paint room? Was the painter allowed to stow any inflammables there?

A. He was not. The inflammables were stowed in chests aft, according to regulations, and when inflammables were in excess of our chest capacity they were allowed to be kept in the bathroom of the port or admiral's cabin.

Q. I believe Japan dryers, turpentine, and such were kept forward inside the superstructure. Am I not correct?

A. That is my recollection.

Q. Regarding the electric plant of the *Maine*, have you any reason to believe, from your observation of the lights or from any reports that may have been made to you, that there had been serious grounding?

A. None whatever; and there was no sudden flaring up of the lights before the explosion.

Q. No perceptible disturbance of the lights?

A. None whatever; there was a total and sudden eclipse.

Q. What were the regulations of the ship in regard to taking the temperature of the magazines, etc.?

A. There were no special regulations other than those that were regulations. The magazines were examined according to regulations, and reports made accordingly and sent to the Department. I always examined the temperature myself and conversed with the ordnance officer as to the effect of various temperatures on the contents of the magazines, and in his opinion, and my own, the temperatures were never near the danger point. I do not think there was any laxity in this direction. I can not recollect any. When I joined the ship I found it was considered unnecessary to use slippers in the magazine, and I directed that they should be used.

Q. Do you recollect any work going on in the magazine or shell rooms on the day of the disaster?

A. My recollection is that the keys were called for that morning at quarters in the usual way. I can not recollect any other call for the keys on that day.

Q. Were the keys properly returned after quarters?

A. Yes; so far as I can recollect. The regulation reports were made at 8 o'clock by the executive officer. The keys of all the shell rooms and magazines, and the spare keys, have been recovered by the diver in my stateroom, where they were always kept.

Q. At the time of the disaster what boilers were being used?

A. The two after boilers in the after fire room. More than one boiler was in use, for the reason that our hydraulic system was somewhat leaky.

Q. Please inform the court in a general way, giving any particulars you wish to give, in regard to your relations to the Spanish authorities and native authorities or people, from the time of the arrival of the *Maine* until the time of your disaster.

. My relations with the officials were outwardly cordial, and I have ground for assuming that they were not really cordial. The mem- s of the autonomistic council of the Government, however, seemed nave brought to the attention of the Navy Department the fact that lid not visit them. They made me no suggestions to visit them. om the letters and telegrams received from the Navy Department ere seems to have been some embarrassment caused the Government Washington by the fact that I made them no visit. I took the ground the department that it was unknown etiquette to call on the civil embers of the colonial government other than the governor, but that would have exceeded etiquette at any time on suggestion from the ouncil. Without waiting for orders I made a visit afterwards. My isit was pleasantly received, and promptly returned by certain mem- ers of the council. They sent on board a large party of ladies a day or wo afterwards. The president of the council, on board the *Maine*, nade me a very cordial address, which I could not understand, and hich was interpreted to me briefly. I replied briefly, expressing kind entiments and a hope for the continuance of cordial relations between Spain and the United States. Fancying that some expression cordial o the colonial or autonomistic government might be expected of me, I evaded the point, and used only this expression: "I beg to express my admiration for the high purpose of your honorable body." My reply was afterwards printed in at least two papers in Havana, but the terms made me favor autonomistic government in the Island. I am informed that the autonomistic government in Havana is unpopular among a large class of Spanish and Cuban residents. I have no means of knowing whether my apparent interference in the political concerns of the island had any relation to the destruction of the *Maine*.

Q. Was there ever any demonstration of animosity by people afloat?

A. Never on shore, so far as I am informed; but afloat there was a demonstration. It was the first Sunday after our arrival, on board a ferryboat, densely crowded with people, both civil and military, who were returning to Havana from a bull fight in Regla. The demonstration consisted of yells, whistles, and apparently derisive calls emanating from about thirty or forty people at most. It was not general.

Q. During the stay of the *Maine* at Havana did you take other than the ordinary precautions which are usually taken on every man-of-war for her protection?

A. I did.

Q. Please state them fully.

A. I had sentries on the forecastle and poop, quartermaster and signal boy on the bridge, signal boy on the poop; the corporal of the guard especially instructed to look out for the port gangway; the officer of the deck and quartermaster especially instructed to look out for the starboard gangway; a quarter watch was kept on deck all night; sentries' cartridge boxes were filled, their arms kept loaded, a number of rounds of rapid-firing ammunition kept in the pilot house, and, in the spare captain's pantry, under the after superstructure, additional charges of shell close at hand for the secondary battery; steam kept up in two boilers instead of one; especial instructions given to watch carefully all the hydraulic gear and report defects; the officer of the deck charged with the necessity for making detailed reports to me, even in minor matters. I had personally instructed the master at arms and the orderly sergeant to keep a careful eye on everybody that came on board, and to charge all their subordinates to the same purpose. I instructed them that, when any persons came on board to go below, they were to go with them, and carefully observe any packages that

might be held, on the supposition that dynamite or other high explosive might be employed; and to afterwards inspect the routes these people had taken, and never to lose sight of the importance of my order. I further instructed the marine officer to make at least two visits during the night to the posts of the vessel. The whole purport of my orders and directions was that we should consider the *Maine* in a position demanding extreme vigilance. Doubtless I gave many other detailed orders of a minor character that I can not now recall.

Q. Regarding strangers being in the ship, at what time were they compelled to leave the ship?

A. I think Lieutenant-Commander Wainwright was rather severe on desultory visitors. Very few visited the ship, except people of the highest social standing in the city. They came commonly from 2 to say 5 o'clock. They were always accompanied about the ship by officers, and of course under the supervisory orders of the master at arms and sergeant of marines. People were allowed to visit the ship from about 10 to 12, and about 1 to 4. I think there were but two visits of Spanish military officers. Once, about two weeks ago, a party of five or six Spanish officers came on board during my absence. They were reported to me as having been constrained, and not desirous to accept much courtesy. They accepted no refreshments, but I afterwards learned that it is Spanish custom not to accept refreshments unless they are at hand at the time the offer is made. On another occasion, about the same time, a Spanish officer came off with his wife. He made a visit to my cabin, and was shown about the ship by an officer under my direction. I invited Spanish officers to visit the ship; in fact, I made considerable effort to get them on board socially in order to show good will according to the spirit of the *Maine's* visit to Havana; but with the exceptions noted, no military officer of Spain visited the ship socially, so far as I can remember. I know that the purser of the *Alfonso XII* made a social visit; but I can not recollect a purely social visit from other Spanish officers. The ward-room officers of the *Maine*, perhaps, have further information on this point.

Q. Among the precautions which you took was the fact of having extra lookouts on the deck. Was there ever any report of any unauthorized boats attempting to approach the ship and being ordered off?

A. Never, to my knowledge.

Q. On the night of the disaster, were all your extra precautions in force? I mean, in regard to quarter watches?

A. I assume that they were; they were never rescinded, and up to the night of the explosion, as far as my observation could go, my knowledge is that they were carried out. I was especially impressed during the whole visit here by the prompt tendency of the sentries to report any infractions of orders on the part of the crew.

Q. At the time of the accident, do you know what boats were down, and where?

A. I assume that one of the cutters was down, and one of the steam launches. I think the first steam launch was down. The steam launch, I have since been informed, was riding at the starboard boom, and that one of her crew was saved. He is now in the hospital at Havana.

Q. What kind of a night was it at the time of the explosion?

A. It was a very quiet and warm night, and I remember distinctly that the echoes of the bugle at tattoo were singularly distinct and pleasant. A little rain fell after the explosion, which may have been precipitated by the concussion of the explosion.

Q. Was it a dry night?

There were stars, but I think it was somewhat overcast. I think several stars after the accident, but it was somewhat overcast ding to my recollection.

How was the *Maine* heading at the time of the explosion?

Approximately northwest. She pointed toward the shears—some- to the right of the shears, near the admiral's residence.

Where were you at the time?

I was writing at my port-cabin table, after side. I was dressed.

Please give your experience in full?

I was just closing a letter to my family when I felt the crash of xplosion. It was a bursting, rending, and crashing sound or roar mense volume, largely metallic in its character. It was succeeded metallic sound—probably of falling débris—a trembling and lurch- motion of the vessel, then an impression of subsidence, attended n eclipse of the electric lights and intense darkness within the n. I knew immediately that the *Maine* had been blown up and she was sinking. I hurried to the starboard cabin ports, thinking ight be necessary for me to make my exit in that way. Upon look- out I decided that I could go by the passage leading to the super- cture. I therefore took the latter route, feeling my way along and dying myself by the bulkheads. The superstructure was filled with ke, and it was dark. Nearing the outer entrance I met Private hony, the orderly at the cabin door at the time. He ran into me , as I remember, apologized in some fashion, and reported to me t the ship had been blown up and was sinking.

reached the quarter-deck, asked a few questions of those standing ut me—Lieutenant Commander Wainwright, I think, for one—then ked the orderly for the time. He said that the exact time of the losion was 9.40 p. m. I proceeded to the poop deck, stood on the e rail, and held on to the main rigging in order to see over the poop ning, which was baggy and covered with débris; also in order that ight observe details in the black mass ahead. I directed the exec- ve officer to post sentries all around the ship, but soon saw that re were no marines available, and no place forward to post them. t being quite clear as to the condition of things forward, I next ected the forward magazine to be flooded if practicable, and about same time shouted out myself for perfect silence everywhere. This s, I think, repeated by the executive officer. The surviving officers re about me at the time on the poop. I was informed that the for- rd magazine was already under water, and after inquiring about the er magazine was told that it was also under water, as shown by condition below reported by those coming from the wardroom and erage.

About this time fire broke out in the mass forward, over the central erstructure, and I inquired as to the spare ammunition in the cap- n's pantry. That region was found to be subsiding very fast. At s time I observed, among the shouts or noises apparently on shore, t faint cries were coming from the water, and I could see dimly ite, floating bodies, which gave me a better knowledge of the real uation than anything else. I at once ordered all boats to be lowered, en it was reported that there were only two boats available, namely, gig and whaleboat. Both were lowered and manned by officers and n, and by my direction they left the ship and assisted in saving the unded jointly with other boats that had arrived on the scene from e Spanish man-of-war, from the steamer *City of Washington*, and from ler sources. Later—I can not state precisely how long—these two

boats of the *Maine* returned to the starboard quarter alongside, and reported that they had gathered in from the wreck all the wounded that could be found and had transferred them to the other boats—to the *Alfonso XII* or to the *City of Washington.*

The poop deck of the *Maine*, the highest point, was by that time level with the gig's gunwale while she was afloat in the water alongside. The fire amidships was burning more fiercely and the spare ammunition in the pilot house was exploding in detail. We had done everything that could be done so far as I could see. Lieutenant Commander Wainwright whispered to me that he thought the 10-inch magazine forward had been thrown up into the burning mass, and might explode in time. I directed him then to get everybody into the boats over the stern, and this was done, although there was some little delay in curbing the extreme politeness of the officers, who wanted to help me into the boat. I directed them to go first, as a matter of course, and I followed and got into the gig. We proceeded to the steamer *City of Washington*, and on the way I shouted to the boats to leave the vicinity of the wreck, and that there might be an explosion. I got Mr. Sylvester Scovell to translate my desire to one or two boats which were at that time somewhat nearer the fire than we ourselves were.

Having succeeded in this, I went on board the *City of Washington*, where I found our wounded all below in the dining saloon on mattresses, covered up, and being carefully attended by the officers and crew of that vessel. Every attention that the resources of the vessel admitted was being rapidly brought into use. I then went on deck and observed the wreck for a few minutes, and gave directions to have a muster taken on board the *City of Washington* and other vessels, and sat down in the captain's cabin and dictated a telegram to the Navy Department. At this time various Spanish officers—civil, military, and naval—appeared on board, in their own behalf and in representative capacity, expressing sympathy and sorrow for the accident. The representatives of General Blanco and of the admiral of the station came on board, and the civil governor of the province was on board in person. I asked them to excuse me for a few minutes, until I completed my telegram to the Navy Department.

After finishing the telegram and putting it in the hands of a messenger to be taken on shore, I conversed for a few minutes with the various Spanish gentlemen around me, thanking them for the visit and their sympathy. I was asked by many of them the cause of the explosion, and I invariably answered that I must await further investigation. For a long time the rapid-fire ammunition continued to explode in detail. The number of the wounded was reported to me later. I have some difficulty in remembering figures. I think we found about 84 or 85 men that night who survived. It was also reported to me that the wounded on board Spanish vessels had been taken to the hospitals on shore, as were also the survivors who had reached the machina, in the neighborhood of the shears on shore. To keep a clear head for the emergency I turned in about 2 o'clock, getting little sleep that night, owing to the distressing groans of the wounded.

Q. By the time you reached the quarter-deck, were all the large explosions over?

A. So far as my experience is concerned there was simply one impression of an overwhelming explosion. I do not recollect details. I have already stated the explosions of minor character.

Q. But you yourself saw no large upshoot of flame?

A. When I came from the cabin, I was practically blinded for a few

ls. I thought only of the vessel, and took no note of the phe-
ıa of explosion. It is probable that the explosive column had
led wholly or practically by the time I reached the deck. I am
ıre, because of the intense blackness.
You state in your story that the *City of Washington* attended to
ounded. Did not the Spanish man-of-war also do the same?
I am not very sure personally, but the reports were that they
doing all that was possible. There was no reference to me on the
of the Spanish officers for sending the wounded on shore. I
ne and believe that they did everything in their power to care for
rounded, and have continued to do so most conscientiously ever
.
How many were wounded; how many killed; and how many were
d not wounded?
. I would have to refer to my figures for that, and they are not now
and. The muster, I think, shows 101 saved, including the wounded,
253 lost. Some of the wounded have since died. My duties have
ı too complex since the explosion to enable me to memorize all the
res.
. From your examination of the wreck, as far as you have been able
nake, what magazines or shell rooms, if any, should you say were
wn up?
. From the appearance of things about the wreck it is extremely
icult to come to any conclusion. The center of the explosion appears
ıave been beneath and a little forward of the conning tower, and on
port side. The forward part of the superstructure has been
own upward backward over the after part and toward the starboard
e, indicating an explosion on the port side of the ship. In the
ion of the center or axis of explosion was the 6-inch reserve mag-
ne, which contained very little powder—probably, I am informed,
out 300 pounds. The 10-inch magazine is in the general region,
t it is on the starboard side, under the forward turret, which is
ll out on the starboard side. Over the 10-inch magazine in the
ding room of the turret, and in the adjoining passage, and well on
starboard side, were a number of 10-inch shell, permanently placed.
ere were also several additional shell in the loading room. It is
icult, therefore, to conceive that the explosion involved the 10-inch
gazine, because of the location of the explosion, and because I have
l no reports that any 10-inch shell were hurled into the air by the
losion. The violence of the explosion, although not its immediate
ality, indicates that the 10-inch magazine may have been involved.
Q. Where was the 10-inch shell room?
A. The 10-inch shell room was abreast the 10-inch magazine on the
t side. It opened on the port side of the vessel.
Q. Was it not between the reserve 6-inch and 10-inch magazines?
A. It was.
Q. Do you know the thickness of the bulkhead between those three
visions?
A. I can not recollect. I should say that it was of ordinary metal,
thickness of a bulkhead of similar construction in other parts of
ship.
Q. Do you know what was between the coal bunker and the magazine?
A. I think nothing but the ordinary steel plate. It is so aft.
Q. Where was the small-arm ammunition locker forward, and what
as in it?
A. We had received a new supply of ammunition, and this was kept

forward of the thwartship armor bulkhead. I mean the small-arm and rapid-fire ammunition.

Q. Was there any smokeless powder?

A. There was no great gun smokeless powder ammunition. All the great gun ammunition was the ordinary brown powder.

Q. Was there not a 6-inch ammunition room forward of the small-arm ammunition rooms?

A. There was; supply for the forward 6-inch guns.

Q. On what side was the powder stowed in that one?

A. I have visited it, but I can not now exactly recall the exact position of the stowage. I know the powder chute is on the starboard side.

Q. Do you think that the forward 6-inch magazine blew up?

A. I do not think so. I can not find reason to suppose so. One man at least was blown out of the forward superstructure into the water. It is more than probable that he would have been blown to atoms if that magazine had exploded.

Q. Where did you keep your gun cotton?

A. Aft, under the cabin. The war heads were all stowed in that part of the ship which was not affected by the explosion. It was away aft.

Q. Where were the gun-cotton primers and detonators kept?

A. They were always kept in my cabin.

Q. Was any torpedo of the *Maine* fitted with its war head at the time of the explosion?

A. It was not. They were put in especially good condition, but none were fitted with war heads.

Q. Please state all the steps you have taken since the accident to ascertain its cause, and any results you may have obtained.

A. I have examined the wreck myself, conversed with other officers and men, and to some slight extent, in a categorical way, with the Spanish admiral. I have had a board of three officers make inquiries throughout the bay, but I have not yet received the reports from all the officers; nor have I had time to read the preliminary reports now in hand. I have not sent down any divers until this morning, not having had the necessary facilities. The best divers here are apparently in the employ of private parties, and since the Spanish authorities are very much averse to an investigation except officially, on the ground, as stated by the Spanish admiral, that the honor of Spain is involved, I have foreborne to examine the submarine portion of the wreck for the cause of the explosion until this morning. The divers of the fleet are now at work. I have had divers down in the cabin, and have recovered by that means the cipher code and magazine keys.

Q. What was the state or the condition of the *Maine* as far as discipline was concerned?

A. It was excellent. This is attested by the fact that the *Maine* was chosen for the duty on which she was engaged. She would not have been chosen had she been in any other than good discipline. The marine guard was in excellent condition. The medical reports from the medical department will show, I think, that about one man and one-quarter per diem were on the sick list during the past year. In the paymaster's department I think I am justified in saying that none of the reports of the paymaster to the Government at Washington were returned to the vessel for correction during my period of command. In the engineer's department the vessel was always ready and always responsive. I can recollect no letter from any source relating to the engineer's department which could be considered in the least of an

dverse nature, except that the bureau once objected to a boiler being sed in any degree as a tank. I think the punishment reports of the *laine* are as small as those of any other vessel of the Navy in proporion to complement. They were uncommonly small. A quieter, betteratured, well-ordered, and apparently satisfied crew I have never nown on board any vessel in which I have served.

Q. Have you any fault to find with the behavior of any officer or man t the time of the disaster?

A. None. I consider that the conduct of all was admirable. The ehavior of the officers toward me personally and the prompt and reponsive recognition of my authority was admirable, and instances of ravery are known both among the officers and crew in the direction f rescuing shipmates.

(The judge-advocate announced that at present he had no further uestions to ask Captain Sigsbee.)

Examination by the COURT:

Q. What is the highest temperature you remember to have been reorted in the forward magazines?

A. The highest temperature that I remember—and I think I can recall he figures—was 112°; but that was in the after magazine, where the emperatures were higher than in the forward magazines. I do not ecollect the temperature in the forward magazine, because they were ot so high as in the after magazine.

Q. Was any loose powder kept in the magazines, or was it all stowed n the usual air or water-tight cylinders, which each contains a charge?

A. I never permitted any to be kept loose, and do not believe that ny was so kept.

Q. What was the status of the coal bunkers next to the forward nagazines? Were they full, or had there been any coal used out?

A. All the bunkers were ventilated through air tubes, examined eekly by the chief engineer, and otherwise as was necessary, and hey were connected electrically to the annunciator near my cabin door. he forward coal bunker on the port side was full, so I understand; he forward coal bunker on the starboard side adjoining the magazine as been reported to me as being one-half full, and it was in use at the me of the explosion.

(The judge advocate here informed Captain Sigsbee that no further estimony would be taken from him at present, and that he should ppear to morrow, Tuesday, at 10 a. m., when the testimony given by im to-day will be submitted to him for his approval.)

The court then, at 1 p. m., adjourned to meet to-morrow, Tuesday, the 2d instant, on board the United States light-house tender *Mangrove*, at 0 o'clock a. m.

SECOND DAY.

U. S. LIGHT-HOUSE TENDER MANGROVE,
HARBOR OF HAVANA,
Tuesday, February 22, 1898—11 o'clock a. m.

The court met pursuant to adjournment of yesterday, but was one hour late on account of official visits to the captain-general and the admiral commanding the naval forces.

Present: All the members of the court, the judge-advocate, and Capt. Charles D. Sigsbee, U. S. Navy.

The record of the proceedings of yesterday was read and approved.

Lieut. G. F. M. Holman, U. S. Navy, appeared as a witness, and was sworn by the president.

Examination by the judge-advocate:

Q. Please state your name, rank, and present station.

A. George F. M. Holman, Lieutenant, U. S. Navy, stationed on board the U. S. S. *Maine*.

Q. When did you join the *Maine*?

A. When she went into commission, on the 17th day of September, 1895.

Q. What duty have you performed on board the *Maine* during that time?

A. The duty of navigator and ordnance officer.

Q. Did this duty also put you in charge of the electric plant?

A. Yes.

Q. Were you on board the *Maine* when she last came into the harbor of Havana, Cuba?

A. I was.

Q. Upon what day was that?

A. The date of arrival—January 24, 1898, this year.

Q. You have been on duty on board the *Maine* ever since?

A. Yes.

Q. In what depth of water was the *Maine* moored?

A. Five and a half fathoms. Around the mooring buoy the water varied in depth from 5½ to 6 fathoms.

Q. What kind of bottom?

A. Very soft, muddy bottom.

Q. Were you on duty on board the *Maine* from the time she arrived here up to the present?

A. Yes.

Q. Regarding the magazines of the *Maine*, what precautions do you know were taken for safety whenever the magazines were opened?

A. The usual precautions were taken with regard to all lights, if any were burning, and to stop smoking. The police, the master at arms, and others were always notified, and word sent, in fact, all over the ship. The galley was screened and the flag was hoisted in receiving ammunition on board, or putting it out. On all occasions, when magazines were opened, word was sent, as already said, all over the ship.

Q. What precautions were taken by the men in entering the magazines or shell rooms?

A. The question came up some time ago as to putting on the magazine shoes, that is, a short time after Captain Sigsbee took command. Prior to that time the order had not been enforced in regard to magazine shoes and slippers. Captain Sigsbee gave the order to make them wear their magazine shoes when they went down.

Q. Were all other precautions taken described by regulations?

A. Yes; so far as I know.

Q. Please state whether any work had been going on in the magazine or shell rooms, or in the small-arm ammunition rooms, within a day or so of the explosion?

A. On Monday we had our usual drills, and part of it being a drill of the powder division at their stations. I do not know of any work going on around the magazines. I would, no doubt, have known if any had been undertaken.

Q. Was Monday the day of the explosion?

A. No; Tuesday was the day of the explosion.

Q. On the night of the explosion, at 8 o'clock in the evening, when the reports are usually made, were the magazines and shell rooms reported secure?

A. That I do not know. The reports were not made to me.

Q. But you have no reason to believe that any of them were opened?

A. No, sir.

Q. Who was in charge of the gunner's work at that time?

A. Chief Gunner's Mate Brofeld; the gunner had not been on duty for something like three weeks.

Q. Had Brofeld been chief gunner's mate of the *Maine* during her whole commission?

A. Yes.

Q. Did you consider him a thoroughly reliable man?

A. Yes.

Q. Do you consider the individual members of the gunner's gang reliable?

A. Yes.

Q. How many of the gunner's gang were saved?

A. I have not seen the list.

Q. Please state to the court how the orders in regard to the taking of the temperatures of the magazines and shell rooms were carried out on board the *Maine*.

A. The temperature was taken daily of the magazines and shell rooms and ammunition rooms, and recorded in monthly reports to the Bureau.

Q. Was this fully carried out up to the time of the explosion?

A. I have no doubt that it was. I know of its having been carried out to within at least two or three days previous. I presume that it was carried out the remaining part of the time.

Q. Who took this temperature?

A. The chief gunner's mate; previously the gunner.

Q. How high did the temperature reach during your experience on board the *Maine*?

A. The hottest magazine was the 10-inch after magazine, where it reached as high as one hundred and ten in hot weather, remaining there for some time.

Q. Can you state to the court how much ammunition was stowed in the 6-inch reserve magazine which was on the port side of the ship abreast of the 10-inch shell room?

A. I think there were about 200 pounds of saluting powder in tanks. If there was any other powder there, it was of small amount. I am not sure.

Q. Were there any 6-inch charges stowed there?

A. I think not. We had room for all our 6-inch powder in the regular 6-inch magazines. I know of no 6-inch charges.

Q. How are the magazines and shell rooms on board the *Maine* constructed? Are they lined with wood?

A. No; the bulkheads are iron and not lined with wood. They are floored with gratings—a wooden flooring; the powder is kept on wooden racks. The shells are stowed in chocks.

Q. Do you know the thickness of the bulkhead between the reserve magazine and the 10-inch shell room?

A. No; I do not.

Q. There is, I believe, a steel bulkhead between the two?

A. Yes; I think so.

Q. How much powder was stowed in the forward 10-inch magazine?

A. I think there were about 150 or 160 tanks, representing seventy-five or eighty charges, say, approximately, some of these being full and others reduced charges, some 125 pounds to the tank, that being the weight of one of the tanks of a full charge. These figures I give I can not be exact in.

Q. I suppose there were about as many shell in the shell rooms as there were full charges in the magazine?

A. Yes, probably the same number.

Q. How was the fixed-ammunition room forward located?

A. Over near the midship line of the vessel, abaft the 6-inch magazine.

Q. Can you state approximately what that contained at the time of the explosion?

A. That contained 6-pounder and 1-pounder shell and small-arm—that is, rifle and 6-millimeter—ammunition. I can not say how much.

Q. What was in the forward 6-inch magazine?

A. About two hundred or more 6-inch charges and a corresponding number of shell in the shell room adjoining.

Q. On which side was the powder stowed?

A. A little over to the port side of the midship line.

Q. In the 10-inch magazine forward the powder was to starboard of the shell, was it not?

A. Yes.

Q. Do you know what there was between the coal bunkers and the reserve magazine—how thick a partition, and of what material?

A. I do not know positively.

Q. You have stated that you were also the electric officer of the ship. Will you please state what wiring went down into the magazines and shell rooms? I mean the forward one.

A. None. There were electric lamps in the light boxes, and wires leading to these lamps, but they were separated from the magazine by a double plating of glass.

Q. Were there any steam pipes in dangerous proximity to the magazine or shell room?

A. No.

Q. Were you on board at the time of the explosion?

A. Yes.

Q. Did you notice any serious action of the electric light which would indicate grounding just previous to the explosion?

A. No.

Q. Where were you at the time of the explosion?

A. In the after part of the wardroom mess room.

Q. With whom?

A. With Lieutenants Jungen and Jenkins and with Chief Engineer Howell.

Q. Please describe your experience in full.

A. While conversing with Mr. Jungen and Jenkins, a heavy explosion occurred, which was evidently in the forward part of the ship. This explosion shook the ship violently, and the noise it made consisted of a low grumbling, comparatively speaking, a low and heavy grumbling, followed by a heavy booming explosion. It was precisely similar to many other submarine explosions I have heard, except that it was on a much larger scale. A submarine explosion always gives two shocks—one transmitted by the water, the other immediately following—the atmospheric shock. The lights went out at once, and we

left in darkness. My first impression was that the ship had been ked. I called to the rest, "We have been torpedoed. Get up on ?" In the darkness I could not see whether the others were ahead e or following me. I made my way to the wardroom ladder, and l the ladder intact, so far as I could judge by feeling, and went is ladder and out through the door in the after superstructure to nain deck. I found the ship settling very fast, and a great deal of kage about, so I went up on the poop, where I found Captain bee and a number of officers and a few of the men.

ie quarter boats that were in condition were lowered at once and to pick up men who were around the ship in the water crying for . Efforts were made to extinguish the fire, which had broken in the wreck of the middle superstructure. These efforts were vailing, and there was little that could be done beyond rescuing a people who could be gotten at forward. The ship settled slowly, l careened slightly to port. After everything had been done that ld be done the ship was abandoned, Captain Sigsbee being the last to leave. The condition of the wreck was practically the same as w, except that the ship has settled lower in the water since we left . When we got into the boats the poop deck was dry, and, I should lge, about 2 feet above the water. The condition of the forward part lo not know. I did not know the state of the tide at the time.

Q. When you first heard the rumbling noise you spoke of, did the ip list either way?

A. Not so far as I observed. I observed a heavy shaking of the ship. there was any lifting either way, it was not perceptible to me.

Q. When the heavy explosion took place which followed it, had you ached the upper deck?

A. No. The first part of this explosion I have spoken of and the cond part, the heavy one, succeeded each other almost simultaneously, id a very short interval of time separated the two features.

Q. Did the second explosion list the ship, as far as you can recollect?

A. No; not as far as I can recollect or observed.

Q. You have had considerable experience at Newport in matters of xplosives, I believe. What was your impression of the whole affair?

A. My impression, not verified yet by what the divers are finding, that a very heavy mine went off under the *Maine's* bottom.

Q. Did you think that the explosion of this mine—remember I am ly speaking of your impression—was followed by the blowing up of ıy of the *Maine's* magazines?

A. The noise produced by a heavy mine would be great in itself, and lding this noise to it would probably be coincident, practically form- ıg one and the same explosion. From the noise alone I can hardly rm an opinion whether the magazine went off also.

Q. During the stay of the *Maine* at Havana were you executive ficer at times?

A. No.

Q. Were you acquainted with the special orders issued by your ommanding officer in regard to extra lookouts at night and the uarter watches on deck?

A. I heard them spoken of officially.

Q. Did you ever hear of any unfriendly demonstration being made t night, or any unauthorized boats attempting to approach the ship nd being ordered off?

A. No.

By Capt. CHARLES D. SIGSBEE:

Q. What was the state of discipline on board the *Maine* just following the disaster?

A. Remarkably excellent, every one doing his duty with coolness.

By the COURT:

Q. Would, in your opinion, the noise produced by the explosion of her magazine so low in the water as those of the *Maine* be very similar to an explosion of a mine from the outside of the ship?

A. I think it might be.

Q. Was there any private ammunition or loose ammunition stowed in the forward magazine?

A. No.

Q. Was there any other ammunition other than the ordinary powder used on board?

A. No; none that I know of. I am sure there was none.

By the JUDGE-ADVOCATE:

Q. Where were the fixed torpedo charges stowed?

A. We had only a few filled ready for use in the torpedoes, and they were kept by the officer of the powder division, Mr. Hood. I think that he had them in the supply boxes of the torpedoes, together with the other accessories.

Q. Where was the gun cotton stowed?

A. The wet gun cotton in the war heads was stowed in the torpedo-head room, which was aft, under the forward part of the steering-engine room. The dry gun cotton for the torpedo primers and the exploders were stowed in lockers in the cabin.

By the COURT:

Q. At what times were the temperatures of the magazines taken, and was it necessary to open the magazines and shell rooms to do so?

A. The order which I gave for taking the temperatures of the magazines and shell rooms, and which, I believe, was generally carried out, was to take the temperatures after quarters, or as near quarters as may be convenient. It was not necessary to open them to take the temperature—not to open them completely—a small plate, ordinarily closed, being removable from the hole through which the thermometer could be reached.

Q. In describing the manner in which the magazines were fitted, you say the floor of the steel deck of the magazine was covered with a grating. Was there any grating on the sides of the magazines?

A. No.

Q. Did the tanks stow against the steel bulkheads?

A. No, they were not stowed to touch the steel bulkheads, as I recollect; the uprights and the framework for holding the tanks were set a little ways from the bulkhead. I do not think that it would have been possible to stow the powder tanks to touch the side. They rested in chocks and did not touch the sides.

There being no further questions to ask this witness, he was notified to appear to-morrow morning at 10 o'clock to read over his testimony, and after having been cautioned by the president of the court not to converse in regard to matters of the inquiry, he withdrew.

The court here took a recess until 1.45 p. m.

The court reassembled at 1.45 p. m.

Present: All the members of the court, the judge-advocate, and Capt. Charles D. Sigsbee, U. S. Navy.

Lieut. Commander RICHARD WAINWRIGHT, U. S. Navy, appeared as a witness and was duly sworn by the president.

Examined by the JUDGE-ADVOCATE:

Q. What is your name, rank, and present station?

A. Richard Wainwright, lieutenant-commander, U. S. Navy, executive officer of the United States battle ship *Maine*.

Q. Since when have you been executive officer of the *Maine*?

A. I relieved Lieut. Commander A. Marix at Norfolk on the 7th day of December, 1897.

Q. Have you been on board the *Maine* ever since then?

A. Every day; until February 15.

Q. Will you please tell the court how the regulations in regard to paints and inflammables were carried out on board the *Maine*?

A. Strictly carried out. None below.

Q. What were the regulations on board the *Maine* about closing the doors and everything below decks at 8 p. m., when holds and storerooms were reported?

A. Not only the holds and storerooms were closed, but all the watertight doors, excepting those absolutely needed for communication. All the hatches from the protective deck up, excepting those over the dynamo room, and those two that communicate through over the evaporators and allow the heat to come up.

Q. Was the usual report made by you to the commanding officer at 8 p. m., on the night of the disaster?

A. It was. I can state here in special connection that the captain instructed me on Saturday to be particular to see if the inner passages were closed. Yes, it was about Saturday. We had a board with hooks on it, and tallies for all the doors that were not regularly closed, but only closed for collision, or for night, or for guard quarters, etc. I made an examination myself of that, and found some of the tallies missing about the same time, and gave special instructions to Mr. Cluverius to go through the inner passages prior to the time of closing, and see all the tallies in place, and to afterwards examine the board so as to see if they had been closed; and I had also the intention on Tuesday night in my mind to examine the board, but I did not get around.

Q. Were the regular reports made to you at 8 o'clock that night?

A. They were.

Q. Had the magazines been opened that day?

A. Not to my recollection.

Q. What were the orders in regard to visitors and people not belonging to the ship while you were in Havana?

A. All visitors were scrutinized by the officer of the deck before coming on board, and only those that were thought desirable were allowed to come on board. Unless a special party belonging to the officers, only a few at a time were allowed on board. All the masters-at-arms and sentries had special orders to allow nobody below unaccompanied. When there were people not taken around by officers, but who the officer of the deck thought desirable to be shown around, they were always accompanied by a reliable member of the crew, and at such

times they were not to take them into intricate parts of the ship, and they were confined to the berth deck.

Q. Captain Sigsbee, of the *Maine*, issued certain orders and instructions in regard to special lookouts at night and a quarter watch to be kept on deck. Did you take steps to see this order carried out?

A. I did.

Q. Were they in force and being carried out at the time of the disaster?

A. They were. I heard the quarter watch mustered, and the officer inquiring whether they all understood their stations, where their stations were at the guns, etc. The men had been standing quarter watches for some time, knew their stations, and therefore the officer of the deck merely questioned those he was doubtful about as to whether they knew their stations. I saw the sentry from the poop after the disaster. He came on board the *City of Washington* and brought his belt and rifle. None of the other lookouts were saved that I know of.

Q. Who was the officer of the deck at the time of the disaster?

A. Mr. Blandin.

Q. During the stay of the *Maine* at Havana, did any hostile demonstration afloat ever come to your notice?

A. No, sir.

Q. Do you know of any case, either reported to you or from your personal observation, of an unauthorized boat attempting to approach the ship and being warned off?

A. Not warned off; but frequently these small boats were hailed and came very close. The hail was answered and they went on.

Q. Did you have confidence in the police force of the *Maine*?

A. The utmost confidence.

Q. Did you have confidence in the marine guard of the *Maine*?

A. Yes; a good marine guard and under good discipline.

Q. What is your opinion of the discipline and the character of the crew of the *Maine*?

A. Fine discipline; the crew were very obedient, very quiet men. They needed a little more exercise, that was the only fault that I could find.

Q. Do you know what boats were down at the time of the explosion?

A. I know that the first steam cutter was down. I believe that to be the only boat.

Q. Where was she at the time?

A. At the starboard boom.

Q. Where were you at the time of the disaster?

A. When the explosion took place I was in what is used as the captain's office, called on the plan the admiral's office.

Q. Will you please state your experience at the time of the explosion?

A. I was standing in the office with Mr. Holden, who was in there at the time. I felt a very heavy shock, and heard the noise of objects falling on deck. I was under the impression, from the character of the noises, that we were being fired upon. I moved out and came on the main deck through the starboard door, and passed up on the after-superstructure deck by the ladder on the starboard forward corner. I then recognized the captain's voice. As near as I can recollect the course of events, the captain told me to see the boats ready to be lowered, and I gave the order to clear away the boats. I saw very few men coming, and I went from davit to davit to see someone ready to cast off the falls. I found generally that they were all officers. Most

of the officers I recognized from time to time right on the poop. I then noticed indications of fire forward. This all occurred very quickly together. I spoke to the captain about flooding the magazines, or he spoke to me about it. Someone then pointed down the hatch, where the water was coming up, and of course there could be no reason to flood the magazines. I then called someone to help me to go forward and see if we could get the fire out.

I remember Mr. Hood and Mr. Boyd started with me, and we succeeded together by going over the awning to what was apparently the break of the central superstructure—the afterpart. As soon as I got there it was evident from the mass of what appeared to be burning cellulose there was no chance of fighting the fire. Mr. Boyd got upon the superstructure and passed two men who were crying out very loudly—one had his arm broken, I think—and got them both in the gig. They were both able to help themselves after they recovered from the shock. Before going forward I gave the order to lower the gig, the captain acquiescing to this order, and when I returned lowered the two remaining boats—the second whale boat and the barge. The three boats had different officers in them that I had detailed to go into this boat or that. We pulled about the afterpart of the ship and picked people out of the water. By that time the ship was crowded with boats. The first one that I noticed was from the *City of Washington.* I noticed a number of Spanish boats. I suggested to the captain that there might be danger from the mass that was burning of further explosion. I was equally confident that there was no one left in the water, and that we had better get the crowd of boats out of the way. He authorized me to shove the boats off.

I ordered the gig to back in, and ordered the other boats off. The captain did not want to go. I pressed him finally, and the only way to get rid of the men was to shove off ourselves. When the captain followed me into the gig, we pushed in among the boats and induced them to go off, taking the wounded to different vessels. The captain then took the gig to the *City of Washington*, lying on our port quarter, say between three and four hundred yards distant. I then ordered an officer to commence taking a list of the saved and wounded of the *Maine's* crew. I sent Mr. Blandin in the gig to pull around the ship, and sent Mr. Holman over to the Spanish flagship to get our well men, if there were any, and take a list of the wounded. Not having sufficient men to keep up the patrol, I called the gig in by the captain's direction. That was some considerable time after the disaster, when there was no chance of any wounded being left.

Q. What was the discipline on the part of the officers and men immediately following the explosion?

A. I consider it excellent. All orders were obeyed with the promptness of a drill. The captain told me what orders he wished me to give, and the only order not promptly obeyed was the final order to leave the ship, and the officers hesitated until it was given in an imperative manner.

Q. Please state your experience of the shocks and noises you heard during the explosion.

A. I only remember one very heavy shock. I was so much shaken up that it took me an appreciable time to find the handle of the door, the door having been closed by the shock, and pull it open.

Q. Did the ship list any at this time?

A. The first list I noticed was after we commenced lowering the boats—a list to port.

Q. When did you first see and examine the wreck after the disaster?

A. At daylight the following morning I took the gig and Lieutenant Hood and a few of the men and attempted to board the wreck. I was warned off by an armed boat's crew—Spaniards. I then pulled around the wreck. It was not fully daylight enough to make my impression at that time valuable. There were still some burning fragments. I know that parts of the wreck which I thought I recognized then I found I was mistaken in when I had a chance to examine it in daylight.

Q. Will you please describe the wreck as you found it after you had a full chance to examine it by daylight?

A. The after part of the ship appeared to be intact from the crane aft, with a heavy list to port, the port turret being about 2 feet under water. The main deck was folded back, carrying the central superstructure with it at a line between the two cranes and about the line between the two fire rooms. It was folded in a direction from port to starboard, so that the port 6-inch gun was lying nearly over the starboard 6-inch gun, the conning tower pointing downward about where the armory was—that is, the starboard after corner of the superstructure. The forward smokestack was lying abreast and partly over where the first whaleboat hung; the siren was on the starboard side of the after superstructure. The after smokestack was lying on the port side abreast of the fore-and-aft bridge, between the after and central superstructure. At the lowest tide we had I stood on the port waterways, and could see nothing that I could recognize as any part of the ship forward of the crane on the port side of the main deck.

There were some portions of the wreck forward of this line mentioned on the starboard side. By looking in underneath it I saw a torpedo port, apparently of the starboard forward torpedo. I recognized part of the washroom—I believe it was part of the foremen's washroom—immediately abaft the starboard turret having a small scupper with a lip, a hold-down valve, and also a half round bulkhead separating portions of the washroom. Forward of that again I recognized pieces of bottom plating with anchor scars. They had a triangular piece that led me to believe it to have been under the starboard anchor. Forward of that was some wreckage with old rope, which I think had been where the anchor gear was stowed. Forward of that one of the fore yardarms was sticking up. As far as I can tell from the above water view, there is an angle between the after body of the ship and the forward, with an apex to starboard.

Q. You have had charge since then of the wreck?

A. With Captain Sigsbee's orders, I have had general charge.

Q. Have divers been at work? If so, since when?

A. Since about the 17th.

Q. Will you please describe any discoveries of importance that have been made by any of these divers, and, if it is a matter of importance, give the name of the diver, if you can?

A. The first thing of importance that I know of having been found was the finding yesterday of two powder tanks, one 6-inch and one 10-inch. They were crushed together and flattened in. The divers could report very little that day. That diver was Chief Gunner's Mate A. Olsen. I will bring those tanks to the court to-morrow. These cases did not contain any powder. The 6-inch case, while ruptured and torn, did not appear to me as if it had been injured by an explosion of powder within it. The 10-inch case I thought to have been ruptured by the powder within it when I examined it, but I was far from certain. I could not understand its not being more seriously

ıpart. If I had seen the case without any knowledge of an ıion, I should have said it was not an exploded case. These were in the forward body of the ship, and I now believe them to have 'ound in the reserve magazine.

ı morning a 10-inch tank was recovered full of powder, with the slightly opened. That gave me the impression that the tank had 'orced open by weights or pressure without flame or heat, as there ıfficient opening, had there been flame or excessive heat, to reach ›wder, and as I carried it in my mind, with pressure in there it l have been fired before any water could have possibly reached ırowned it. Ensign Bromby is looking out for the divers forward Navel Cadet Cluverius for the divers aft. The divers tell me that can find nothing of the port side of the ship forward of this gen- line that I have mentioned. They find the cellulose belt, I am not in on which side. They also think they have been in the coal ;ers. They found one shell fused for 6-pounder near where they d the full case, or somewhere in that vicinity, only approximately.

. I forgot to ask you in speaking of the crew, to give me the record hief Gunner's Mate Brofeld, as far as you know?

. He was the most painstaking, obedient, hard-working man. I e known him to be working in the turrets most of the night.

. Do you know anything about his good-conduct medals and con- ıous-service certificate?

.. No.

). But you do know that he had a permanent appointment?

ı. I do. I can say that he was well acquainted with all the work the ship, and while he was acting gunner things went in a very sat- ıctory manner, whereas they had not done so before.

Witness desired to state the following:

saw in the chief engineer's room of the *City of Washington* a large ce of cement heavily coated with oil. I then thought it was a piece bottom cement. I now am inclined to believe it came from the for- rd blower on the port side.

There being no further questions to ask this witness, he was notified appear before the court to-morrow at 10 a. m. and read over his tes- ıony; and he was furthermore informed that it was the wish of the ırt that at any time any important discoveries were made in the eck he should at once appear and notify the court.

The witness having been cautioned by the president not to converse matters relating to the inquiry, he withdrew.

Naval Cadet W. T. CLUVERIUS, U. S. Navy, appeared as a witness fore the court and was sworn by the president.

Examined by the JUDGE-ADVOCATE:

Q. What is your name, rank, and present station?

A. Wat Tyler Cluverius; cadet U. S. Navy; attached to the U. S. ttle ship *Maine*.

Q. How long have you been attached to the *Maine*?

A. Ever since the 15th day of May, 1897.

Q. Have you, during that time, ever been assistant navigator?

A. About four months of that time.

Q. Do you know all about the electric wiring of the ship?

A. A great portion of it, sir.

Q. Is there any electric wire on board the *Maine* so laid as to endan- r the magazines or shell rooms?

A. To my knowledge there is not.

Q. Were you on board the *Maine* on the night of the explosion?

A. I was, sir.

Q. Where were you?

A. I was in room 3 of the junior officers' quarters.

Q. Will you please state to the court what shocks you experienced and what next you heard?

A. My first knowledge of anything occurring was a slight shock as if a 6-pounder gun had been fired somewhere about the deck. After that a very great vibration in my room, which was then followed by a very heavy shock, and still continued vibration and rushing of water through the junior officers' mess room, and the sound as if something breaking up all the time.

Q. Were you asleep when you felt the first shock?

A. I was not, sir.

Q. What work have you been engaged on since the disaster?

A. I have been engaged in working with the divers.

Q. Will you please state to the court any important discovery or discoveries made by the divers? Give the name of the diver or any important reports made to you which might give us some information as to the state of the wreck and the cause of the explosion.

A. I was in charge of the diving aft, from the after part of the ship, when we found several important papers, which were turned in to the commanding officer. I was present this forenoon on the float forward where they had gotten up a 10-inch powder tank intact. That is about all of importance that I know of in connection with this. My work has been wholly aft.

Q. What is the situation of the junior officers' mess room?

A. The junior officers' mess room is in the same compartment as the wardroom officers' mess room, directly forward of it.

There being no further questions to ask this witness, he was notified to appear before the court to-morrow morning at 10 o'clock and read over his testimony; and, after being cautioned by the president not to converse on matters relating to the inquiry, the witness withdrew.

Naval Cadet J. H. HOLDEN, U. S. Navy, appeared as a witness before the court, and was sworn by the president.

Examined by the JUDGE-ADVOCATE:

Q. What is your name, rank, and present station?

A. Jonas Hannibal Holden, naval cadet, U. S. Navy, attached to and recently serving on board the U. S. S. *Maine*, now wrecked in the harbor of Havana, Cuba.

Q. How long have you been attached to the *Maine*?

A. Since the 15th day of May, 1897.

Q. How much of that time have you been assistant navigator?

A. About four or five months.

Q. Do you know of any electric wiring on board the *Maine* that would endanger the magazines or shell rooms?

A. I do not.

Q. Where were you at the time of the explosion?

A. I was in the captain's office with Lieut. Commander Wainwright, the executive officer of the *Maine*.

Q. By the captain's office you mean, I suppose, the one marked as the admiral's office on the plan?

A. Yes, sir.

Q. Will you please state to the court what shocks you experienced d what noises you heard at the time of the explosion?
A. At the time of the explosion, first, there was an explosion of con- erable force, and about three or four seconds afterwards there was other explosion of far greater force, and a terrible shaking; then we shed up on deck.
Q. Did the ship list any during either of these explosions?
A. She seemed to be picked up and listed slightly to starboard.
Q. Was that the first or second explosion, this list to starboard?
A. It seemed to me to be the first.
Q. What duty have you been on since the explosion?
A. On duty as aide to the captain.
Q. Have you had anything to do with the divers?
A. No, sir.

Examined by the COURT:

Q. Where would you locate either of these two explosions—on the rboard or on the port side?
A. The first explosion, my impression is, occurred on the port side. aw a shoot of flame, which seemed to be on the port side.
Q. How about the next and larger explosion?
A. I could not distinguish anything at the second explosion.
Q. Was there any water?
A. All I saw was a column of flame.
Q. Did this column of flame seem to come up through the ship or up rough the decks?
A. I could not tell. It seemed to be well to port. It was well over port.

There being no further questions to ask this witness, he was notified return to-morrow morning at 10 o'clock and read over his testimony en convenient.
The court then adjourned to meet to-morrow, Wednesday, February , 1898, at 10 o'clock a. m.
The court then proceeded to make a personal examination of the eck.

THIRD DAY.

U. S. L. H. TENDER MANGROVE,
Harbor of Havana, Wednesday, February 23, 1898—10 a. m.

The court met pursuant to adjournment of yesterday.
Present: All the members of the court, the Judge-Advocate, and pt. Charles D. Sigsbee.
The record of the proceedings of yesterday, the second day of the quiry, was read and approved.

Lieutenant HOLMAN was called before the court and handed so much the record of yesterday as contained his testimony, whereupon he thdrew, after being directed to read over his testimony and indicate y corrections he desired to make.

The JUDGE-ADVOCATE. I now ask the permission of the court to troduce as stenographer Mr. John W. Hulse, and Mr. H. L. Bisselle, sistant to the stenographer. I should like to have them sworn, and sist me in preparing the record of the court.

Permission being granted, the stenographer, John W. Hulse, was duly sworn by the judge-advocate, in accordance with U. S. Navy regulations, and took his seat as stenographer of the court. Mr H. L. Bisselle was also sworn as assistant to the stenographer.

Chief Engineer CHARLES P. HOWELL, U. S. Navy, appeared as a witness for the prosecution, and was duly sworn by the president.

Examined by the JUDGE-ADVOCATE:

Q. What is your name, rank, and present station?

A. Charles P. Howell, chief engineer, U. S. Navy, stationed on the *Maine*.

Q. When did you join the *Maine*?

A. The 21st day of December, 1895, to the best of my recollection. It was either the 19th or 21st, I have forgotten which—about the 21st.

Q. You have been chief engineer of the *Maine* ever since?

A. Yes, sir.

Q. What coal bunkers on board the *Maine* are adjacent to the magazines in the forward half of the ship; I mean magazines and shell rooms?

A. If I could refer to the blue print I could tell you the numbers of them. A15 is on the forward starboard side under the forward turret. That is adjacent to the 10-inch magazine. A16 is similarly situated on the port side, and that is adjacent to the 6-inch reserve magazine, I think they call it. B3 is on the starboard side, and B5 is also on the starboard side. They are adjacent to the magazine. B4 and B6 are on the port side, also adjacent to the 6-inch reserve magazine.

Examined by the COURT:

Q. The first two are adjacent to the 10-inch magazine?

A. Yes, sir. Perhaps I could state that a little better now, as I first went from the starboard side to the port side and back again.

Examined by the JUDGE-ADVOCATE:

Q. Go ahead in your own way. Make it as plain as you can.

A. On the starboard side, adjacent to the 10-inch magazine, are coal bunkers A15, B3, and B5. On the port side, adjacent to the 6-inch reserve magazine, are coal bunkers A16, B4, and B6.

Q. Please state to the court, as near as you can recollect, the history of coal bunker A15, from the time you joined the ship up to the time of the explosion?

A. A15 is a bunker which it is difficult to put coal in or to take coal out of, and, besides, you have to go through B4 and B5. To take coal out of A15 you first have to empty B3 and B5, and to put coal in A15 you have to partially fill B5, and then fill from B5 into A15. As I say, it is a difficult bunker to put coal in and take coal out. Those bunkers forward have been emptied as frequently as possible in order to lighten the ship forward. We have always tried to take coal out of the forward bunkers as much as possible, because when they are full the ship has a tendency to go down forward. It was the same way on the port side. A16 is a difficult bunker to fill, and is the last one that is emptied on the port side, because we have to take coal out of B4 and B6 before we can take any out of A16.

Q. Have you always inspected coal on board the *Maine* before receiving it?

A. Yes, sir.

Q. Have you, during the time you have been chief engineer of the

e, had any signs of any kind of spontaneous combustion in the ›unkers?

No, sir; none whatever. In connection with that I have frequently ined the different bunkers all around everywhere, and the differinds of coal. I have never seen any signs whatever of any bunker ng. I have examined them from the outside, and when they have ı coal out of them; also particularly when we have taken in coal I thought was more liable to spontaneous combustion than other I have never seen any signs of heating.

When did you make your last examination of these bunkers, pre- › to the explosion?

Bunkers B3, B5, B4, and B6—unless you want to consider some ·s, I will not mention any others—are emptied, and they have been ied about two weeks.

That is, previous to the explosion?

Yes, sir; B3, B5, B4, and B6.

Those have been empty?

They have been empty ten days or two weeks. All of those have entirely empty. In that time we have painted all those bunkers we have scaled them. Also we have scaled the chutes that led ı to them, and painted them. A15 was about half empty until the of this explosion. On that day, at 4 o'clock, we began taking coal ı A15, to keep the ship on an even trim. I have not been in that ter personally since they began taking coal out of it, though I have ed around these bunkers, and I felt of them within a week on both s. I have been to the wing passages, and every time I go through e I can feel those bunkers. I pass right by the bunkers. It is a ·ter of an inch thick, and I put my hand on them. I never have › through there without putting my hand on them to feel the temıture.

. You never found any signs of heating?

. I never found any signs of heating—any variation.

. At the time of the explosion what was the condition of bunker ?

. It was full of coal.

. Is it easy of access for the purpose of feeling the temperature?

. Yes, sir; on all four sides.

. Do you mean that it can be easily felt for temperature on all four s?

. Outside; yes, sir, for temperature.

. How close is this bunker to the magazine itself?

. Personally I do not know what is between the bunker and the azine. I know there is sheet iron, but whether that is lined with l on the magazine side I do not know.

. The inboard bulkhead of the bunker is against the magazine, is ›t?

. Yes, sir.

. Is not a portion of the inboard bulkhead of this bunker easily ssible without going into the magazine?

. Yes, sir.

. The escape hole is there, I believe?

. Yes, sir.

. Leading into the loading room?

. Yes, sir.

. Then, in case there should be any spontaneous combustion in

bunker A16, would it not be likely that it would be felt by people going to and fro in the passing room?

A. Yes, sir; decidedly so.

Q. What kind of coal was in bunker A16?

A. To the best of my recollection, it was New River coal. I have a memorandum of that in my notebook, but I haven't it here. It is lost.

Q. Where do you receive New River coal?

A. At Newport News.

Q. Regarding the steam piping of the *Maine*, was there any piping in dangerous proximity to the forward magazines or shell rooms?

A. No, sir.

Q. Did any steam pipes lead through bunker A16?

A. No, sir.

Q. What boilers were in use at the time of the explosion?

A. The two aftermost boilers in the ship, one on each side.

Q. What was the condition of those boilers?

A. In good condition. We were in the habit of carrying about 80 to 100 pounds of steam in port.

Q. For auxiliary purposes?

A. For auxiliary purposes, in port.

Q. How much did you carry in those same boilers when steaming at sea?

A. One hundred and twenty pounds.

Q. Who was the engineer of the watch at the time of the explosion?

A. Assistant Engineer Merritt.

Q. I believe he was lost?

A. Excuse me; I made a mistake. It was Mr. Morris—Assistant Engineer Morris.

Q. Did you have what you consider a competent watch on duty for two boilers?

A. Yes, sir.

Q. A watch of reliable men?

A. Yes, sir.

Q. In your opinion it would have been impossible for those two boilers to explode with the pressure they were carrying?

A. Yes, sir; the explosion would not have done much damage under ordinary circumstances.

Q. What is the approximate length of the two fire rooms?

A. Each fire room is about 48 feet long.

Q. Where were you at the time of the explosion?

A. In the ward-room mess room.

Q. Will you please state to the court what noises you heard and what shocks you felt at the time of the explosion?

A. I was suddenly startled with an unusual shock. There was then a continued series of convulsions and a noise like the tearing of the ship to pieces, then a tremendous crash, then apparently the sound of falling débris. Then the ship felt as if it was waving and unsteady on the deck.

Q. Did you notice any list of the ship at the first explosion or the first shock?

A. No, sir; I did not notice it until after this series of shocks, when I started to go on deck. Then the ship appeared to be listed over about 10°.

Examined by the COURT:

Q. Which way?

A. To port.

Q. That is a great list, you know.

A. Let me modify that. I should say it was listed over about 5° to port.

Examined by the JUDGE-ADVOCATE:

Q. After you reached the deck, did you see any upshoot of flame, or anything of that kind?

A. No; none to any extent. Now and then there would be a small explosion, like the explosion of a 6-inch shell, perhaps.

Examined by Captain SIGSBEE:

Q. You have said that bunker A16 was full of coal?

A. Yes, sir.

Q. Was that bunker not exposed on two sides on the deck immediately above the 6-inch reserve magazine?

A. It was.

Q. Was not the immediate vicinity used by the men employed in the hydraulic room as a sleeping place or loafing place?

A. There was a storeroom——

Q. I mean on the inboard side?

A. Yes, sir; there was a storeroom on the port side of the hydraulic room. One side of it was up to the bunker, and that room was much frequented.

Q. But was there not another side of that bunker in the hydraulic room itself—the inboard side of the bunker?

A. No, sir; there was a storeroom between the hydraulic rocm and the bunker.

Examined by the COURT:

Q. It was the electric storeroom?

A. The electric storeroom.

Examined by Captain SIGSBEE:

Q. What I am trying to get at is that the men used to habitually lie in that corner—the port forward corner in the hydraulic room—with their heads right against what must have been that bunker?

A. There is a storeroom between the hydraulic room and the bunker.

Q. There was?

A. Yes, sir; on the same level.

Q. Was not that bunker exposed on three sides at the forward entrance of the port-wing passage?

A. Yes, sir; that bunker was exposed on three sides, which was much frequented. It was exposed on the fourth side by an empty bunker at this time, and we had had men in there painting.

Q. It is not likely that the hands of the crew must have rested on that bunker many times a day through the use of that wing passage?

A. Yes, sir.

Q. In traversing the passage?

A. Yes, sir.

Examined by the COURT:

Q. Could the entire length of the bunker A16, abutting against the 6-inch reserve magazine, be examined from the outside of the bunker?

A. Not from the magazine itself.

Q. That is, from the outside of the coal bunker?

A. Allow me to explain that. I have never been in that magazine, but I do not see any reason why the temperature could not be found from the magazine as well as any other place.

Q. How could you examine the temperature of that coal bunker on the outside where it abutted against the top of the magazine?

A. We did not examine it from the magazine; we examined it from aft and outboard.

Q. This coal bunker is represented on the same deck as this magazine. How could you get at the outside of that coal bunker on this deck?

A. Not on the deck shown here, but on another deck.

Q. But the magazine is not on another deck.

(Captain Sigsbee here made a rough drawing of the bunkers and explained it to the court.)

Examined by the COURT:

Q. Would the heating of coal in the bottom of such a bunker cause such a heat two decks above as to be very noticeable?

A. I should say yes, sir.

Q. That is, no heating could take place in one part of the coal bunker which would not diffuse itself through the mass?

A. Without rising up to the highest point of the bunker.

Chief Engineer HOWELL desired to add the following testimony:

The dynamo room also goes out of that bunker, in addition to what has been brought up.

The judge-advocate requested that the testimony given by the witness be not read to him by the stenographer, but that he be directed to report to-morrow morning at 10 o'clock, when he will be furnished with so much of the record as contains his testimony and asked to withdraw for the consideration of the same, upon the completion of which he will be again called before the court and be given an opportunity to amend his testimony as recorded or pronounce it correct. The request was granted and the witness was instructed accordingly, whereupon he withdrew, after being cautioned by the president not to discuss matters pertaining to the inquiry.

Lieutenant HOLMAN appeared before the court.

The JUDGE-ADVOCATE. If the court please, I request that the witness be cautioned that the oath previously taken by him is still binding.

The witness was duly cautioned as requested by the judge-advocate.

The JUDGE-ADVOCATE. Lieutenant Holman, you have read over the testimony given by you on yesterday. As it it now recorded, is it correct?

Lieutenant HOLMAN. It is correct, as now recorded, with one exception.

The JUDGE-ADVOCATE. Sit down, please, and make that correction.

Lieutenant HOLMAN. I would like to change my evidence with regard to the amount of saluting powder that was on board.

The JUDGE-ADVOCATE. Make your statement.

Lieutenant HOLMAN. I stated 200 pounds. It must have been considerably more than that, but how much more I do not know. On reflection, thinking of the amount that we used for one salute, and the saluting powder not being down so as to require a new supply or a new requisition, we must have had very much more than 200 pounds.

The JUDGE-ADVOCATE. You can not give us approximately how much was in that magazine?

Lieutenant HOLMAN. No; I can not.

Examined by the COURT:

Q. What was the ordinary temperature of the dynamo room?

A. The temperature of the dynamo room in weather such as exists at present was about 90°—not far from 90°.

Q. If there had been a serious rise of temperature in bunker A16, which abuts on the port side of the dynamo room, do you think it would have been quickly noticed in the dynamo room?

A. No; not unless it were such a rise in temperature as to set fire to woodwork—such as to manifest itself in that way, setting fire to the woodwork in that bulkhead.

Q. Would not the men naturally frequently come in contact with that bulkhead?

A. No.

Q. It was the port side, and it formed in that way [indicating]?

A. In the port side dynamo room, aft, between the entrance to the central station and the side of the ship, was a desk and several searchlight ammeters.

(A blue print was here shown to the witness.)

Q. What I wish to know is whether in case of a serious rise of temperature in the bunker would it not have been noticed in the dynamo room?

A. I do not think it would.

Q. You said, in answer to a question, that a rise in temperature would not be noticed unless it were such a rise as would set fire to the woodwork on that bulkhead. There was woodwork on that bulkhead, was there?

A. Yes.

Q. Was that in such close contact with the bulkhead that in case that bulkhead had become very hot, or heated to a heat which would have ignited wood, it probably would have ignited that switchboard or caused it to char?

A. Yes; if the heat had been maintained for some time. The woodwork, as I recollect, was not in immediate contact with the bulkhead, but set off a little way from it.

Q. But would not a serious rise of temperature in that bulkhead have made itself felt in the general temperature of the dynamo room to such a degree as to be very noticeable; because a temperature which will ignite anything like coal or wood is a very high one?

A. Yes; I can conceive that there might be such a temperature as to manifest itself in that way.

There being no further questions to ask this witness, his testimony was read aloud to him, and by him pronounced to be correct; and, having been cautioned by the president not to discuss matters pertaining to the trial, he withdrew.

Lieutenant-Commander WAINWRIGHT here appeared before the court.

The JUDGE-ADVOCATE. Lieutenant-Commander Wainwright, I now hand you so much of the record of the proceedings of yesterday as contains your testimony before the court of inquiry. I ask you to withdraw, read it over, and make any corrections you desire, after which you will please return and inform the court of those corrections.

Paymaster CHARLES M. RAY, U. S. Navy, appeared as a witness and was duly sworn by the president.

Examined by the JUDGE-ADVOCATE:

Q. What is your name, rank, and present station?

A. Charles M. Ray, paymaster, U. S. Navy, attached to the U. S. S. *Maine.*

Q. How long have you been attached to the *Maine?*

A. I joined her on the 2d of February last.

Q. Referring to your storerooms in the forward part of the *Maine*, was there any inflammable or dangerous matter stowed in any of those storerooms?

A. Not to my knowledge and belief, sir.

Q. What was stowed forward belonging to your department, and where was it stowed?

A. I think these are the only two rooms I had [indicating on blue print]. There was stored in them preserved meats, small stores, and some clothing.

Q. Where were you at the time of the explosion?

A. I was in my own room, sir.

Q. In the wardroom?

A. In the wardroom.

Q. Will you please state to the court what shocks you experienced, and what noises you heard?

A. My first impression, my first shock, you might say, was a sort of an upheaval. My impression then was, from the downward tendency, that the ship had been broken in half, and that she was sinking. I immediately got out of my chair and stood under the lintel of the door. There were small pieces falling from above—small pieces of the deck, I suppose. I gathered myself together from that, and heard the water rushing in from forward, and then I made my way on the superstructure. After that, the only explosions I heard were from the *City of Washington*, of the small arms.

Q. At the first shock you felt, did you notice any perceptible list of the ship?

A. No, sir.

Q. After you reached the deck, did you notice any upshoot of flame, or anything of that kind?

A. No, sir; not except the ordinary burning of fire.

Examined by the COURT:

Q. What was the usual temperature of your storerooms just forward of that magazine?

A. That I can not say. I am not familiar enough with the storerooms.

Q. You had not been in the ship long?

A. No, sir; just two weeks, and I had not settled down, in fact.

Examined by the JUDGE-ADVOCATE:

Q. Was your jack-of-the-dust saved?

A. No, sir.

Q. Was your yeoman saved?

A. No, sir; their names are not on the list.

There being no further questions to ask this witness his testimony was read aloud to him and by him pronounced to be correct; and, having been cautioned by the president not to discuss matters pertaining to the trial, he withdrew.

Surg. LUCIEN G. HENNEBERGER, U. S. Navy, appeared as a witness and was duly sworn by the president.

Examined by the JUDGE-ADVOCATE:

Q. What is your name, rank, and present station?

A. Lucien G. Henneberger, surgeon U. S. Navy, attached to the *Maine*.

Q. How long have you been attached to the *Maine*?

A. Since November 10, 1896.

Q. Where did you stow inflammable matters belonging to your department?

A. We had alcohol, whiskies, and brandies in the medical storeroom, and a few bottles of each for immediate use in the dispensary.

Q. Where was the medical storeroom you speak of situated?

A. Beneath the wardroom.

Q. Did the dispensary lead into the sick bay?

A. It did.

Q. Were there any sick at the time of the explosion?

A. There were three or four on the sick list at the time of the explosion.

Q. Were there any attendants to the sick?

A. Three.

Q. Did the apothecary sleep in the dispensary?

A. He did.

Q. Then you feel reasonably certain that if there had been any explosion of any kind there it would have been noticed at once?

A. At once.

Q. Where were you at the time of the explosion?

A. In my bunk.

Q. Will you please state to the court what shocks you felt and what noises you heard at the time of the explosion?

A. I was lying in my bunk reading, and I felt a sudden upheaving of the ship. The lights were extinguished, and this was followed immediately by a deep boom, as of an explosion. That was all I heard.

Q. Did you notice any list of the ship at the first shock?

A. A list to port. As I went up the ladders the ladders inclined toward the port side.

Q. That was after you had felt the first shock—this list?

A. Yes, sir. I felt the shock before getting out of my bunk; but just as I got out of my bunk I made my way forward to the wardroom door and began to climb the ladders.

Q. What I wish to know is whether, at the very first shock you felt, there was a perceptible list?

A. No.

Q. After you reached the upper deck did you notice any upshoot of flame or anything of that kind—any more than the ordinary burning of fire?

A. No.

Q. Can you give the number of the wounded that were sent to the hospital at Havana?

A. There were 29 sent to the San Ambrosia—approximately 29; I do not know whether that is the exact number—and 6 to the Alphonso Treize.

Q. How many of these patients have since died?

A. Six.

Q. How many of the wounded were sent to Key West?

A. I do not know how many went by the *Olivette* the first trip. She left in such a hurry that it was almost impossible to tell. There were 10 sent by the *Mangrove* the following day but one.

Q. You are not able to give this court the number of killed, are you?

A. No, sir.

There being no further questions to ask this witness, his testimony was read aloud to him and by him pronounced to be correct; and, having been cautioned by the president not to discuss matters pertaining to the trial, he withdrew.

Private WILLIAM ANTHONY, U. S. Marine Corps, appeared as a witness, and was duly sworn by the president.

Examined by the JUDGE-ADVOCATE:

Q. What is your name, rank, and present station?

A. William Anthony, private, U. S. Marine Corps, U. S. S. *Maine*.

Q. Were you one of the marine guard of the *Maine* during her last stay at Havana?

A. Yes, sir.

Q. Were you on board the day of the explosion?

A. Yes, sir.

Q. On what duty?

A. On orderly duty, aft.

Q. What watches had you had that day?

A. I had the 8 to 12 p. m. watch—the first watch, sir.

Q. Had you had any watch during the daytime?

A. Yes, sir; from 8 to 12 in the forenoon. I had both watches, 8 to 12 p. m. and 8 to 12 a. m.

Q. During the forenoon watch had the magazine keys been taken out of the cabin?

A. Not by me, sir; not by anybody, to my recollection. The drill was that day, and it did not necessitate opening the magazine.

Q. Do you know whether the keys of the magazine and shell rooms were in their proper place in the cabin at 8 p. m. that night?

A. No, sir; my business did not call me as far as the captain's stateroom.

Q. You made the usual reports to the captain that the magazines were in proper condition that night?

A. Yes, sir.

Q. Where were you at the time of the explosion?

A. I was standing on the main deck, just outside of the door, on the starboard side.

Q. Please tell the court what you felt and what you saw.

A. I first noticed a trembling and buckling of the decks, and then this prolonged roar—not a short report, but a prolonged roar. The awnings were spread, and where the wing awning and the quarter-deck awning should join there was a space of at least 18 inches. I looked out and saw an immense sheet of flame, and then I started in to warn the captain.

Q. Did you notice any perceptible list to the ship at the first shock?

A. At the first shock the ship instantly—that is, the quarter deck, where I was standing—dipped forward and to port, just like that [indicating]. It apparently broke in the middle like that [indicating] and surged forward, and then canted over to port.

Q. Canted over to port after the first shock?

A. Yes; it was continually settling more to port while I was on board.

Examined by the COURT:

Q. I would like to have you describe a little more particularly where you saw this upshoot of flame.

A. It was well forward. It must have been forward of the superstructure. I could see the débris going up with it. I do not know what it was, but I saw firebrands going up.

Q. Was it on the port side or the starboard side?

A. It looked more to port than it did on the midship line. It looked like it covered the whole ship. It was an immense glare that illumined the whole heavens for the moment, as much as I could see for the awnings.

Q. Did you see any water with it?

A. I didn't notice that, sir. I started in the cabin at once.

The court had no further questions to ask the witness.

There were no further questions to ask the witness.

The judge-advocate requested that the testimony given by the witness be not read to him by the stenographer, but that he be directed to report to-morrow morning at 10 o'clock, when he will be furnished with so much of the record as contains his testimony, and asked to withdraw for the consideration of the same, upon the completion of which he will be again called before the court and be given an opportunity to amend his testimony as recorded, or pronounce it correct.

The request was granted, and the witness was instructed accordingly; whereupon he withdrew, after being cautioned by the president not to discuss matters pertaining to the trial.

The JUDGE-ADVOCATE. I would like to state to the court that there are three gentlemen of whom I have knowledge not belonging to the Government who, I believe, saw the explosion from outside the ship, and if the court wishes their testimony, I think I can produce them to-morrow morning. One of them is Captain Teasdale, of the British bark *Deva*; another one is the engineer of the floating dock, Mr. Rolfe. and the third one is the manager of the oil works at Regla, Mr. Van Sickle.

The PRESIDENT. We should have them.

The JUDGE-ADVOCATE. I think they are willing to come to-morrow morning. I only got this information over night.

Lieutenant Commander WAINWRIGHT here appeared before the court.

The JUDGE-ADVOCATE. You have read over your testimony given before the court on yesterday. Is your testimony as recorded correct?

Lieutenant Commander WAINWRIGHT. It is.

The witness then withdrew, after being cautioned by the president not to discuss matters pertaining to the inquiry.

Capt. CHARLES D. SIGSBEE was then called upon by the judge-advocate to state whether his testimony as given to the court in the first day's proceedings was correct as recorded, and he announced that it was correct as recorded.

Captain Sigsbee was then requested to take the stand and did so, being cautioned by the president that the oath previously taken by him was still binding.

Examined by the JUDGE-ADVOCATE:

Q. What officers have been detailed by you to obtain information in regard to any outsiders who may have seen the explosion of the *Maine*?

A. Lieutenant-Commander Wainwright, Lieutenant Holman, and Chief Engineer Howell, all of the *Maine.*

Q. Have any of those officers made any report to you as to obtaining any information?

A. I have had no report made to me yet, but I know that Mr. Holman has some notes.

Q. I have Mr. Holman's notes before me, and I know the witnesses he has found.

A. I submitted to the board, especially to Mr. Holman, whose time was available when I made out the order, a series of questions relating to the phenomena of the explosion, and I gave him directions to interview persons about the bay and in the city, in order to gather information relative to these questions.

Q. Mr. Holman's notes are the only reports that have been made?

A. That is all I have now.

Q. He is one of the members of that board?

A. He is one of the members of that board.

Q. Do you wish to give any further testimony in regard to coal bunker A16? You informed me that you did.

A. Is that the one on the port side?

Q. Yes.

A. It is my opinion that if the interior of coal bunker A16 had been so hot as to be dangerous to the 6-inch reserve magazine that this heat would have shown itself in the outside plating of the bunker, in the passing room of the forward turret, in the wing passage connecting therewith, and in the passage communicating with these two apartments. In passing from the passing room into the wing passage there was a turn to the left. On three sides of this turn the plating of the bunker was exposed. The passage was narrow. The tendency, therefore, of a person in passing and in turning to the left would have been to place the left hand on the plating. I went through this intermediate passage, I think, the day before, and observing that one of the dogs of the manhole escape from that bunker was not tightly wedged in place, I gave directions to see that it was always kept tightly closed, except when intended to be opened altogether. I put my hand on the dog and there was then no appearance of undue heat. This was either the day before or two days before—I think the day before the explosion. Also, there were electric leaves on the outside of this bunker, in the wing passage, and it is probable that undue heat would have interfered with the insulation, and have given warning somewhere. That is all I desire to say on that.

Q. Do you also wish to testify in regard to the record and character of Chief Gunner's Mate Brofeldt?

A. Yes, sir; I had occasion to send Brofeldt's record to the Navy Department two or three weeks ago. His record was a very fine one. He had three good-conduct medals on his present enlistment record, covering about two years. According to my recollection, every mark under every heading was a maximum. He had received no punishment whatever. His record was absolutely perfect, and he would have gained on it, had he continued in the same course, another good-conduct medal.

The court had no further questions to ask this witness.

The judge-advocate requested that the testimony given by the witness be not read to him by the stenographer, but that he be furnished with as much of the record as contains his testimony upon the meeting of the court to-morrow morning at 10 o'clock; that he be directed to

amine the same, upon the completion of which he will be given an portunity to amend his testimony as recorded, or pronounce it correct.
The court then (at 12 o'clock noon) took a recess until 1.30 o'clock p.m.
The court reassembled at the expiration of the recess.
Present: All the members of the court, the judge-advocate, the nographer, and Capt. Charles D. Sigsbee.

Ensign W. V. N. POWELSON, U. S. Navy, appeared as a witness, and s duly sworn by the president.

Examined by the JUDGE-ADVOCATE:

Q. What is your name, rank, and present station?
A. W. V. N. Powelson; ensign, U. S. Navy; serving on board the S. S. *Fern*.
Q. Were you on board the *Fern* when she arrived at Havana shortly er the explosion of the *Maine*?
A. Yes, sir.
Q. How long after the explosion did you arrive? The explosion took ce at 9.40 p. m.
A. We arrived on Wednesday at about 3 p. m.
Q. What duty have you been engaged on since you have been in vana, regarding the wreck of the *Maine*?
A. I have not been on any official duty in connection with the *Maine*.
Q. What duty have you done with regard to the wreck of the *Maine*? ve you not been present a great deal during the diving?
A. Yes, sir; I have been on the *Maine* every day since the *Fern* has en here, and have been present most all day.
Q. Will you please tell the court, as far as you can, the condition of wreck, and also of any important discoveries made by any of the ers, giving the name of the diver, if you can?
A. The forward part of the ship, forward of the after smoke pipe, s been completely destroyed, as far as all appearances go. The con- g tower now lies in a position opposite the door leading into the perstructure aft, and to starboard. The conning tower is inclined at out 110 degrees to the vertical, with the top of the conning tower oard. The forward 6-inch superstructure gun now lies completely rned upside down over the after starboard 6-inch superstructure gun. e frames which supported the deck plating and planking of the port ngway forward of the main deck are bent upward and against the perstructure, the angle of bend decreasing as you go aft. The tures underneath the main deck on the port side, consisting of pipes, od casing for the electric wires, standing lights, etc., have been com- etely wrecked, while on the starboard side these fixtures, occupying a nilar position, are in some cases almost intact.
This is especially so under the conning tower at the starboard side, ere the woodwork of the electric wires is scarcely burned at all. e port bulkhead, between the main deck and the berth deck at the nning-tower support, has been blown aft on both sides, but a great al more on the port side than on the starboard. The fire-room hatch mediately abaft the conning-tower support, between the main and e berth deck, has been blown open in three directions, aft, to star- ard, and to port. The forward side of the hatch, being stronger, ming the support of the conning tower, was not much injured. The es in this hatch were very little injured. The protective deck under f conning-tower supports, where it is secured to the armor tube m the conning tower is bent in two directions. The plates on the t side are bent up and the plate on the starboard side is bent down.

By the COURT:

Q. Do you mean with reference to their original positions?

A. With reference to their original positions. There is a beam supporting the protective deck a few inches abaft the armored tube. This beam, to port of the midship line, was bent up to starboard of the midship line. The rivets were sheared. The beam broke at the midship line, due to weakening at this point by pipes passing through it. These rivets, holding the beam to the deck, were sheared almost at right angles to the fore-and-aft line. The starboard crane was broken completely off, due to the superstructure falling upon it. The port crane supports are bent, but the crane itself seems intact. The forward smokestack now lies forward side up along the starboard quarter-deck, about the position of the waterways, and almost clear of the awnings stanchions. The after smokepipe lies with its forward side uppermost, just inboard of the port turret. The main masthead was broken at a point about 4 feet from the lantern. The foremast fell forward and a little to port. The break just forward of the port crane at the main deck is a very clean one, the wood still remaining fastened to the deck plating at the edge of the break.

Just foward of the conning tower, underneath the main deck, two beams meet at right angles, one fore and aft, and the other athwart ships. The fore-and-aft beam is broken at the point where it touches the athwartship beam. Both parts of the broken beam are pushed from port to starboard. A grating was found on the poop awning, just foward of the after search light. A piece of the side plating, just abaft the starboard turret, between the torpedo tube and the turret, is now visible, about 15 feet forward of the starboard crane, and about at the position of the ship's side. This plate was bent outward, and then the forward end bent upward and folded backward upon itself. This plate was sheared from the rest of the plating below the water line. This plating below the water line has been pushed out to starboard. The gratings from the engine room hatch were blown off.

Q. Those were the unarmored gratings?

A. Yes, sir; the superstructure gratings. In hauling in some wires a strainer was picked up from the bottom at a point about opposite the poop capstan and 70 feet from it—a composition strainer.

Q. The composition strainer, you say, was picked up where?

A. It was picked up on the starboard quarter. I was hauling in the electric wires yesterday and hooked on to it, and picked it up at that point.

Q. Is there anything to show where the strainer came from?

A. The chief engineer thinks it was a strainer from the firemen's wash-room.

Q. It was not an exterior strainer?

A. No, sir; it was not a strainer in the ship's side. The athwartship beam, at the point where the break occurs on the port side, is pushed a little forward at the point where it joined the outside plating.

Q. When you speak of the break, you mean the break in the main deck?

A. Yes, sir; the break in the main deck. Near the piece of outside plating, near the turret to which I have just referred, and just inboard of it are some pieces of red shellacked planks. On these planks is bolted a composition track about 2 inches wide and an inch thick. At the ceiling of the central station a standing light on the port side was found completely blown from its supports, only three screws remaining in the protective deck to mark its position. On the starboard side, about 5 feet from this light, was another deck light, fastened to the

rotective deck, and nothing in this light was destroyed except the lass globe protecting the light and the glass of the incandescent light tself. The woodwork and wires were intact. Did you mean for me to ay anything about what the divers reported, or just what I saw?

By the JUDGE-ADVOCATE:

Q. I would like to have you state any important discoveries which might lead us to draw some conclusion as to the cause, and if the discovery of a diver gave you the information, state the name of the diver; but before you do that, I would like to ask you whether the forward and after parts of the ship were in line.

A. As far as I could judge, the forward and after parts of the ship were not in line. The ends, where the explosion occurred, seemed to have been pushed from port to starboard, I should judge from 5 to 10 degrees.

Q. That makes an angle of the ship with the apex to starboard?

A. With the apex to starboard; yes, sir.

Q. Will you please go ahead with the discoveries of the divers?

A. The divers reported to me that at a point where the 10-inch shell room should be they discovered 10-inch shell, regularly arranged, but the ship had sunk down so much that some of the shell were in the mud.

By the COURT:

Q. That mud was inside the ship, of course?

A. Yes, sir. They were not able to determine that exactly. The name of one diver was Olsen, I think. The diver Smith reported that he saw a number of broken 10 inch powder tanks. He secured a 10-inch powder tank that still contained powder, and it was hoisted to the surface, and is now on board the *Fern*. He also secured some tanks in a better condition, one 6-inch and one 10-inch tank that I saw. This liver reported that he had found more full tanks, but a diver who went lown next after Smith was unable to secure any. At a place where he paymaster's storeroom should be we found a great many vegetable ans. Gunner Morgan reported that in walking on the bottom he fell nto a hole on the port side and went down in the mud. He also eported that, as far as he could judge, everything seemed to be bent ipward in the vicinity of this hole. He also reported that the plates eemed to have been pushed over to starboard and bent down over the p of the 10-inch magazine, from which he reasoned that he would be ble to find, perhaps intact, powder tanks farther down; that the roken ones on top had been broken up by these plates. The one 6-inch nk that I saw appeared to me to have been an empty tank, broken the explosion, as it was not badly dented, and merely ripped the gth of the seam.

By the JUDGE-ADVOCATE:

Q. How did the empty 10-inch tank appear to you?

A. The empty 10-inch tank was badly battered. When I saw it it d been already dipped in a sterilizing solution, and I could see no idences of powder upon it.

Q. Was it ruptured, as if a charge had exploded inside of it?

A. It was flattened out and battered out of all conceivable shape. I ld not say.

By the COURT:

Q. Have either of the divers been on what you consider the outside the ship?

A. They had not up to last night. They report that the mud is so

deep that it will be impossible for them to walk on the bottom, and they wish some large scow moored over that part, so that they can be supported from the scow, and that, I believe, is being done to-day. I requested the diver to go aft and see if he could see the condition of the port forward boiler. He started aft and found coal, and discontinued his work before he got as far aft as the boiler.

Q. What is the condition of the starboard turret?

A. To my knowledge it has not been found, sir.

Q. That is, the place where it belongs has been examined, and you think it is not there?

A. I understand that something was found at or about the place under which the turret formerly was, but they have not been able to determine exactly what it was. I have had no information from the wreck to-day. I have not been there.

Q. What impression is produced upon your mind by the reports, so far as you have quoted them?

A. From reports alone, or from the appearance of the wreck?

Q. I mean either the reports that have been made to you, or the conditions which you believe to exist.

A. The impression produced upon me is that an explosion took place well to port of the midship line and at a point in the length about opposite the conning tower.

Q. What weight are you giving now to the statement made by the gunner, Mr. Morgan?

A. That opinion is based entirely upon the observation of things above water. The fact that a full powder case was found and the fact that empty powder cases were found does not, in my mind, admit of an expression of opinion until something further is produced.

Q. You do not see anything upon which to base an opinion?

A. No reports so far from the divers upon which to base an opinion.

Q. I say again, what weight do you give to the statement made by Mr. Morgan as to his falling into a hole on the port side?

A. No weight, sir.

Q. You give no weight to that?

A. No, sir; because I think he may be mistaken about it.

By the JUDGE-ADVOCATE:

Q. You have stated all that you know about it, have you?

A. I think I have, sir. I have a little notebook in my pocket, in which I made notes of things at the time.

Q. Please refer to that and see if there is anything else?

A. The arc of the engine-room telegraph and the shaft of the steering gear, coming down through the armored tube (turret), was bent from port to starboard underneath the protective deck, and the port side of the protective deck under the conning-tower supports was covered with a greasy sort of deposit, while the starboard side was comparatively free from it.

(At this point Naval Cadet Holden entered the court and was handed so much of the record of the court as contained his testimony. He was then directed to retire, examine it, and return and state whether or not his testimony as recorded was correct.)

Ensign POWELSON then resumed his testimony.

The WITNESS. The forward smoke-pipe hatch, between the main and the superstructure decks, while it is dented, does not show signs of internal pressure of gases. I said that the fire-room hatch did; that

was blown out in all directions, and the hatch at the engine room ere the funnel came through was not exploded. It is dented. The main running along under the main deck had its asbestos covering d canvas burned much more on the port than on the starboard side. On the main deck, just forward of the conning tower, where the fore-d-aft angle bulb beam to which I have referred was located, the nking was blown off on the only remaining plate of the main deck on port side, while the wood was still attached to that part on the star-ard side between the base of the conning tower and the turrets. The od planking there on the plating was still fast to that, while on the rt side it had blown off the plating. All the wood-deck planking and plating was blown off the main-deck beams of the port gangway ward of the break. On the starboard side of the conning-tower sup-rt the protective deck is pulled away from the support about 5 inches. the port side it is not.

By the COURT:

Q. Would that show a pressure from port to starboard?

A. That would indicate that the pressure lifted the protective deck on the port side, and the protective deck on the starboard side held st and bent that deck downward, away from the conning-tower sup-rt, broke that one end of that beam off, and sheared it right straight ross. I have a little sketch here, which the court might look at, to ake clear what I have said.

(Witness here exhibited to the court two sketches, showing diagram various parts of the sunken ship, and explained them to the court.)

Q. Mr. Powelson, you spoke of that strip which is on the starboard de of the outside plating of the ship, which was folded and rolled ck?

A. Yes, sir.

Q. And you gave it as your opinion that the portion of the outer ating underneath that, from which that was torn, was bent outward?

A. Yes, sir; I can see that. That is about 2 feet under water, where at shear occurs.

Q. Can you see the outside plating on the opposite side?

A. No, sir.

Q. You can not?

A. I took some soundings. I forgot to tell you about that. I found bout 5 fathoms of water all along the ship, on both sides, down to the ud. I took a 14-pound lead line, 4½ fathoms, and I dragged with a herry along on the port side for obstructions. I dragged right close where I imagined the waterways on the port side of the ship had een, judging from the position of the ship, and I found no obstructions t all. With 4½ fathoms of line out, going along slowly on the star-oard side, I did find obstructions for a distance of 20 feet from where had reason to suppose the waterways had originally been.

Q. That is to say, the fact that there were obstructions on the star-oard side and not on the port side would indicate that while the port ide was not ruptured, if it was ruptured, the burr was on the inside?

A. I do not think you understood me exactly. There is nothing left f the port plating at all. As you go right in across the ship there is othing. I dragged along the outside to see if there had been any-hing that had fallen out, and I could find nothing. As I came in, tak-g soundings right along from the port side, after I got inside a few et, or nearly under the waterway, then I began to find obstructions about 3½ fathoms of water. I dragged right along here [indicating]

on the port side, and I found nothing along in there; but over on this side [indicating] I did find things all along here; and I found something hard right in here, just abaft that crane [indicating].

Q. Which may be the turret?

A. It was hard for about 15 or 16 feet along there, as near as I could judge, and not much out of mud; probably only 4 feet out of mud; but the lead had a different feel there from what it had anywhere else. That is what I thought was the turret. Of course, I could not be certain, and there is not enough evidence to state that opinion absolutely.

Q. Have you ever been attached to the *Maine?*

A. No, sir; I have never been attached to the *Maine.*

Q. How have you become so well acquainted with the *Maine?*

A. I thought I was going to the *Maine* when she went in commission. I was on the *Vermont* at that time, and I used to go over to the ship frequently and go through her, with an idea of learning. Then I was on the staff of Admiral Bunce, and made an inspection of the *Maine* and learned more at that time.

Q. You think the ship on the port side opposite that support is entirely gone?

A. Yes, sir.

Q. Entirely blown out?

A. Yes, sir; because I could get nothing less inside, I think, than three fathoms and a half of water; but from the break itself it goes right down standing here over the waterway [indicating]. You can go down there about 4 fathoms with the lead line, but there does not seem to be anything out here [indicating]. That little plate to which Captain Chadwick referred is exactly in line with the mainmast.

Q. That protective deck?

A. The protective deck of which you speak. It is on a line with the mainmast at the port crane, and goes to this plate [indicating]. That is the reason I thought that, whether it was the starboard or the port plate, there would not be much difference, except as to the angle, because that was so far over from the side, coming from the mainmast [witness indicates on diagram].

Q. It is an important thing to know. That [indicating] is a piece of the quarter deck. If that had been broken off the ship's side, and was thrown up in here [indicating], that is very material.

A. It is over to port. You can not tell exactly where that place was in the beginning.

Q. Could you not tell by very careful soundings around that or by the divers? You see the divers are even now down at the floor of that [pointing out of the window at the wreck].

A. The divers do not seem to be able to express themselves as to what they see down below. I have talked to them and have not been able to learn very much.

Q. That is the difficulty; they do not know what they find.

A. They see things there, but they do not know exactly what they are or what the conditions are.

Q. How often were you on duty over there at the wreck?

A. As I said, we are not detailed for the duty over there. We have days duty on the *Fern*, but of course Mr. Bookwalter and myself attend to the work on the ship, or on the wreck, or anything Lieutenant Wainwright wants us to do.

There being no further questions to ask the witness, the judge-advocate requested that the testimony given by the witness be not read to him by the stenographer, but that he be directed to report

rrow morning at 10 o'clock, bringing with him an ink sketch ar to the one shown to the court to-day, lettering the different , and also an ink sketch of that piece of protective deck referred the testimony, the sketches to be on foolscap paper, either on rate sheets or on the same sheet, when he will be furnished with uch of the record as contains his testimony and asked to with- for the consideration of the same, upon the completion of which ill be again called before the court and be given an opportunity to nd his testimony as recorded, or pronounce it correct.
ie request was granted and the witness was instructed accordingly, reupon he withdrew, after being cautioned by the president not to uss matters pertaining to the inquiry.

aval Cadet HOLDEN here appeared before the court.

he JUDGE ADVOCATE. Naval Cadet Holden, is the testimony given you before the court on yesterday correct as recorded?
laval Cadet HOLDEN. It is.
'he witness then withdrew, after being cautioned by the president to discuss matters pertaining to the inquiry.
'he court then (at 2.30 p. m.) adjourned to meet to-morrow, the 24th tant, at 10 o'clock a. m.

FOURTH DAY.

U. S. L. H. TENDER MANGROVE,
Havana Harbor, 10 a. m., Thursday, February 24, 1898.

The court met pursuant to adjournment of yesterday (Wednesday).
Present: All the members of the court, the Judge-Advocate, the stenographer, and Captain Sigsbee.
Previous to the meeting of the court the members were engaged in king an examination of the wreck.
The record of the proceedings of yesterday was read and approved.

Chief Engineer HOWELL appeared before the court.

The JUDGE-ADVOCATE. Chief Engineer Howell, I now hand you so ich of the record of the proceedings of yesterday as contains the testimony given by you before the court. Please withdraw, read it over, d then return to the court and state whether you desire to make any rections in the testimony, or whether it is correct as recorded.
The witness then withdrew.

Naval Cadet CLUVERIUS appeared before the court.

The JUDGE-ADVOCATE. Naval Cadet Cluverius, I now hand you so ich of the record of the second day's proceedings as contains the timony given by you before this court. Please withdraw, read it er, and return to the court and state whether you desire to make y corrections in the testimony, or whether it is correct as recorded.
The witness then withdrew.

Mr. WILLIAM H. VAN SYCKEL appeared as a witness, and was duly orn by the president of the court.

Examined by the JUDGE-ADVOCATE:

Q. Please state your full name, your residence, and what business u are engaged in.

A. My name is William H. Van Syckel. My business is superintendent of the West India Oil Refining Company.

Q. Are you a resident of Havana?

A. No; I am a resident of what would be a part of Reglas.

Q. Were you in either Havana or Reglas on the night of February 15, when the *Maine* exploded?

A. I am in a part of the Province of Reglas, but my situation is in the building which they called formerly Billott's Hospital, now the petroleum works; but we belong in part to Reglas. I was in the house, answering your question, at the time of the explosion.

Q. Will you please state to the court all you saw and heard in regard to that explosion?

A. I was inside at the time of the explosion, and immediately went outside. What I saw was a bad sight. Everything was flying in the air. There were columns of black smoke, and pieces and parts of the ship.

Q. Was there any flame flying up into the air?

A. Yes; all those pieces of timber were aflame. It was like pieces of rag and pieces of timber.

Q. You saw no solid upshoot of flame?

A. No; that had passed. There were particles. When I saw it, there were still particles arising.

Q. Please state to the court what sound you first heard which made you leave your house and go out. What was the nature of it?

A. First a rumble. Then the terrific explosion. That rumble startled us, and then the explosion was almost instantaneous. That is, no quicker had we heard the rumble than the shot came.

Q. How long a time elapsed from the time you first started until you came out and saw these pieces in the air?

A. That is hard to state. If you are sitting here at the table and run right to the door when you hear a concussion, it is perhaps one or two seconds.

By Captain SIGSBEE:

Q. Did you see anything like shooting or falling stars or fireworks?

A. Yes; apparently. Those pieces afterwards came down. We stood and saw them come down. There were different colors amongst them, apparently different kinds of timber or different pieces of coal or ash. Some fell very slowly. Others came down more rapidly.

By the COURT:

Q. Were there many small pieces that were on fire?

A. Seemingly, yes; thousands of them.

Q. I mean pieces——

A. They were all sizes from what I should judge from where I stood. My position was about a mile and three-quarters from here.

Q. In sight of the ship?

A. In sight of the ship; yes, sir.

Q. Did you notice whether there were a great many of these what Captain Sigsbee describes as stars, all of one size?

A. No; I could not say that. I couldn't say there were. They appeared to be all of different sizes, going in all directions.

By Captain SIGSBEE:

Q. Did you see any bursting shell?

A. That was afterwards; but they all appeared to be aboard.

Q. There were no bursting shell in the air?

No; no bursting shells in the air. I saw nothing that appeared bursting in the air, any place.
Did any stuff fall in Reglas, near you?
No.
Have you heard of any shell or pieces of shell being picked up ore?
No; I have not.

By the COURT:

Was your view such that you could tell from which part of the his explosion took place?
No; not at the moment. We were not in a position—that is, we that the forward funnel had gone immediately after the explosion. we could see by the glasses.
That the forward funnel had gone?
Had gone. In fact, both funnels had gone, but we could see after- with the light that the forward funnel appeared to be lost— n overboard—and of course the forward mast also. We could ese things from there.
re being no further questions to ask this witness, his testimony ead aloud to him by the stenographer, and by him pronounced to rect; and, after being cautioned by the president not to converse matters pertaining to the inquiry, he withdrew.
witness then added the following testimony:
people who would be able to give more exact information, and ere at the time looking at it, were aboard the bark *Matanzas.* are on their way to New York. They were there in that vessel, hey could see if there was any water column or anything of that ption. Of course they were closer by, and would be better judges, ould give better ideas than we could from shore.
COURT. But they, you say, are on their way to New York?
They are on their way to New York.
re being no further questions to ask this witness, his additional ony was read over to him by the stenographer, and by him pro- ed correct. The witness then withdrew, after being cautioned by resident not to converse about the matters pertaining to inquiry.

ef Engineer HOWELL here appeared before the court.

JUDGE-ADVOCATE. Mr. Howell, you have read over your testi- ?
HOWELL. I have.
JUDGE-ADVOCATE. Is it correct as recorded?
HOWELL. It is.

ef Engineer Howell then resumed the witness chair, and gave llowing additional testimony:

Examined by the JUDGE-ADVOCATE:

After the explosion, Captain Sigsbee appointed you a member of oard to make certain inquiries and get certain information. Is any information which you have obtained which would be useful s court?
No, sir; I have heard a number of versions of the explosion. I t see how they could be of particular use to the court, unless it h one exception. If you would like to have that man come aboard, s on the *City of Washington.*

Q. Do you refer to Mr. Rothschild?
A. Yes, sir.
Q. Will you send him over, if you can?
A. I will do the best I can.
Q. Are there any combustibles of any kind stored below decks belonging to your department? If so, please state what and where.
A. Cotton waste is the only one I think of at this moment. That is stowed in the storeroom abaft of the engine room.

By the COURT:

Q. Clean cotton waste?
A. Clean cotton waste, stowed in a storeroom abaft of the engine room.
Q. Did you have no driers or anything of that sort belonging to your department?
A. They are kept on deck in proper tanks, with wooden boxes outside the tanks.

By the JUDGE-ADVOCATE:

Q. What instructions did you have from your commanding officer in regard to old cotton waste that had been used?
A. We have a number of copper tanks in the engine room and fire room, about 22 inches high and 15 inches in diameter, with covers on them. They are kept there for the purpose of putting old refuse in them, and oil waste and anything of that style that has been used. Every day they are carried away, thrown in the ash pile and thrown overboard.

There being no further questions to ask this witness, his testimony was read over to him by the stenographer, and by him pronounced correct.

After being cautioned by the president not to converse about matters pertaining to the inquiry, he withdrew.

Naval Cadet CLUVERIUS appeared before the court.

The JUDGE-ADVOCATE. Mr. Cluverius, is your testimony as recorded correct?
Mr. CLUVERIUS. It is correct, sir.
The witness then withdrew, after being cautioned by the president not to converse about matters pertaining to the inquiry.

Capt. FREDERICK G. TEASDALE appeared before the court as a witness, and was sworn by the president of the court:

Examined by the JUDGE ADVOCATE:

Q. Please state your full name, residence, and profession.
A. Capt. Frederick G. Teasdale, Walker Hall, Winston, Darlington, County of Durham, England. I am master of the *Deva*.
Q. What is the *Deva*?
A. It is a bark.
Q. Where is the bark *Deva* now?
A. Lying at the Reglas wharf.
Q. How far from the place where the *Maine* was anchored on the 15th of February?
A. Nearly half a mile; between quarter and half a mile.
Q. Were you on board the *Deva* when the *Maine* exploded?
A. I was on board, writing my mail, getting ready for the next day.
Q. Where were you?

A. Sitting at the cabin table writing when I heard the explosion. I thought the ship had been collided with. I ran on deck when I heard the explosion. I felt a very severe shock in my head also. I seized my head this way [indicating]. I thought I was shot, or something. The transoms of the doors of the cabin are fitted in the studs on the side, and they were knocked out of place with the shock. The first seemed to be a shot, and then a second, or probably two seconds, after the first report that I heard, I heard a tremendous explosion; but as soon as I heard the first report—it was a very small one—thinking something had happened to the ship, I rushed on deck, and was on deck just in time to see the whole débris going up in the air.

Q. Please describe, as graphically as you can, how this appeared to you—what you saw.

A. The stuff ascended, I should say, 150 or 160 feet up in the air. It seemed to go comparatively straight until it reached its highest point of ascent. Then it divided and passed off in kinds of rolls or clouds. Then I saw a series of lights flying from it again. Some of them were lights—incandescent lights. Sometimes they appeared to be brighter, and sometimes they appeared to be dim, as they passed through the smoke, I should presume. The color of the smoke, I should say, was very dark slate color. There were fifteen to twenty of those lights that looked like incandescent lights. The smoke did not seem to be black, as you would imagine from an explosion like that. It seemed to be more a slate color.

Q. Was there anything that appeared to you to be shooting stars or anything like that?

A. No; I never saw anything like that; only a series of smaller explosions, after the first one, you know. That occurred at stated intervals, probably twenty minutes or half an hour each. You would hear small reports from the deck, as if they were scattered shells about the deck which were going off, but they would not do any harm; some going in one direction and some in another.

Q. When you first saw this thing, was there a large batch of solid flame?

A. No; I didn't see any flame whatever. There never was any flame whatever.

Q. You are sure you reached the deck in time to see the large explosion?

A. I was on deck in time to see everything. I could bring forward evidence by bringing my mate or any of my officers. I was the first one on deck, and they came up afterwards. The stuff had not reached its final ascent when they came up, and I was up two or three seconds before they were. The stuff was still ascending when they came up.

Q. Could you see whether water was thrown up?

A. No; I was too far away to testify whether there was water or not.

By the COURT:

Q. Could you tell from where you were at what part of the ship this explosion took place?

A. Oh, yes; I could see the ship distinctly from stem to stern. They were working a search light from the shore, and they threw the search light on the ship, and that is the first time I knew it was the American man-of-war had blown up. We were under the impression before that that it was one of these large Spanish steamers that had blown up. They put the search light on the vessel, and the first thing I saw about her was the davit for lifting the steam launch out with. Then I saw the

fighting top on the mizzenmast, or the mainmast, as we call it. I could distinctly see the stem of the vessel, and I could see this patch of débris right in the light. I could see that the funnel was lying at an angle of about 35 degrees, I should say, on the top of the débris, but it seems to have altered its position during the night. I suppose when the stuff finally got settled it changed its position somewhat.

Q. What I refer to particularly was, when you saw this column of smoke and débris ascending, could you tell then what part of the ship it was coming from?

A. No; I could not see anything then. It was too dark then. I don't suppose we noticed very particularly for that, because we were so much interested in seeing the stuff going up that we couldn't see anything of that sort, I suppose. I should say it was somewhere about the middle of the vessel from the appearance of other craft about there at that time. I passed the ship the afternoon before, about 7 o'clock. in a boat.

Q. How many explosions did you hear?

A. I heard two distinct explosions. The first one was a very sharp one, and when that explosion took place it was as though some steamer had collided, and the shock was something tremendous.

Q. That is to your own ship?

A. Yes; I am alluding to our own vessel at the present time. Then there was a tremendous explosion after that, but before the second explosion took place I rushed out of the cabin on deck, thinking something was the matter with our vessel; that she had collided, or something. I rushed up on deck to see what was the matter, and I do not suppose I was more than a second from the time I heard the first explosion until I was on deck. The sound was not fully gone from the second explosion when I reached the deck.

By Captain SIGSBEE:

Q. Did you see the vessel lift in the water at all?

A. No, sir; I can't say that I saw that, but I could distinctly see the vessel from the fore end to the after end—the whole of the stem and stern and everything. I mentioned something to my officers then. There was something on the forecastle head. I think they appeared like two men standing there. I was looking at the ship with a long telescope. It may have been a gun or something of that sort. I do not see how a man could have been standing there, the state the ship was in. I could distinctly see the guns on the foredeck, but there was nothing surrounding them. It seemed as if the protections of the guns had been blown away. The ship was lying with the deck over toward me, from the position we were in at that time, and I could see one gun distinctly there and another one up here again [indicating]. Then on the forward deck I could see two objects. They appeared to me, with a glass, in the dark, like two men standing there; but, of course, it may have been something else.

Q. How much of a wave was thrown over in your direction?

A. There didn't seem to be much of a wave with us, but there was a decided movement of the vessel shortly afterwards. My mate remarked to me afterwards—he said: "Do you feel the vessel rolling now?" And that was my first mate remarked that to me.

Q. Was the vessel heading as she is now?

A. No; we were lying at anchor.

Q. I mean the *Maine?*

A. No; I think the wind was northwest at the time.

Q. I mean the *Maine.* Was she heading practically as she is now?

Yes; practically as she is now; but she seems to have moved her ion somewhat from what I saw her the afternoon before.

I am speaking now of the time of the explosion.

Yes; she is lying much in the same position as she was at the time ie explosions. She did not seem to have altered her position in way since that night—not the slighest.

Did you see any dead fish around the bay?

I never saw any; no, sir.

Have you ever heard that fish leave this harbor at night and o ide?

I never heard any remark about that. I have seen a good many here, but they were very small fish, just spluttering about on the of the water. I have never seen any in the night time, but any when there is any spluttering among the fish it generally occurs he daytime, so far as my observation has gone. The wind coming hat direction carried a lot of light material over our vessel that it. Quantities of paper and small fragments fell over our ship, for some time after. I picked up some boiler coating or co ting steam pipes the next morning. There also seemed to be felt hair. I also picked up an envelope addressed to Mr. Silley, United es ship *Maine*. The stamp was gone from the envelope. The elope was somewhat charred, and showed as though it had been in midst of an explosion, or something like that, and where the stamp ie off the place underneath was perfectly clean. I gave it to the er who came aboard our vessel.

Q. You gave it to Mr. Holman?

A. Yes, sir.

Q. To whom was that addressed?

A. I think Silley or Seller. The writing was rather bad and hard to ke out.

Q. Is that all, Captain?

A. I think that is all, sir. If you wish to ask me any questions, I l be glad to answer them.

There being no further questions to ask this witness, his testimony s read over to him by the stenographer and by him pronounced cor t.

The witness then withdrew, after being cautioned by the president to converse about matters pertaining to the inquiry.

Private ANTHONY here appeared before the court.

The JUDGE-ADVOCATE. Private Anthony, I hand you so much of record of the proceedings of this court as contains the testimony en by you. Please withdraw, read it over, and then return to the rt and state whether you desire to make any corrections, or whether testimony is correct.

The witness then withdrew.

Chaplain JOHN P. CHIDWICK, U.S.Navy, appeared before the court a witness, and was sworn by the president.

Examined by the JUDGE-ADVOCATE:

Q. Please state your full name, rank, and present duty.

A. John Patrick Chidwick, chaplain, U.S.Navy. I have no relative nk.

Q. You are attached to the *Maine*?

A. Attached to the *Maine*.

Q. Where were you on the night of the 15th of February, when the *Maine* was blown up?

A. In my room, aboard the ship.

Q. Please state to the court what shocks you felt, what noises you heard, and what you saw in regard to the explosion.

A. I heard a loud report, and everything became dark as soon as I heard the report. The lights were out, and there was a crashing sound of things falling. I then rushed on deck. I got on the captain's poop and saw the captain there giving his orders. After trying to cheer up the men who were crying out in the water for help, I was ordered by Lieutenant Jungen to go into a boat, which I did. We rowed around the ship and picked up one man. Then, at the orders of the captain, we pulled off for the *City of Washington.*

Q. How many shocks did you feel?

A. I remember only one.

Q. Did you notice any list to the ship when that shock was experienced?

A. It struck me that I did, to the port side. I am not positive about that.

Q. Port down?

A. Port down; yes, sir.

Q. But you are not positive?

A. No, sir.

Q. At the time you reached the deck had the large explosion taken place and was it over?

A. Yes; it was over and the forward part was then aflame.

By the COURT:

Q. From what direction did this first explosion or shock seem to proceed?

A. The impression on my mind can not very well verify anything I would say. It was like a loud report; everything became dark, and then the noise of falling things. As I say, I have an indistinct remembrance of the ship falling toward the port.

Q. Afterwards or at the same time?

A. Yes, sir; when I was in the room; when I heard the report.

There being no further questions to ask this witness, his testimony was read over to him by the stenographer and by him pronounced correct. The witness then withdrew.

Private ANTHONY here appeared before the court.

The JUDGE-ADVOCATE. Is your testimony as recorded correct?

Mr. ANTHONY. Yes, sir.

The witness then withdrew, after being cautioned by the president not to converse about matters pertaining to the inquiry.

Ensign POWELSON then appeared before the court.

The JUDGE-ADVOCATE. Mr. Powelson, have you brought the drawings you were instructed to make?

Ensign POWELSON. I have one. I have not quite finished the other.

The JUDGE-ADVOCATE. You can bring that later.

Ensign POWELSON. Yes, sir.

The JUDGE-ADVOCATE. If the court please, Mr. Powelson has brought with him one of the drawings he was instructed to make, which I request may be appended to the record.

(Said drawing is hereto appended, marked B.)

The JUDGE-ADVOCATE. Mr. Powelson, I now hand you so much of the record of the proceedings of this court on yesterday as contains your testimony. Please withdraw, read it over, and then return to the court and state whether you desire to make any corrections, or whether the testimony as recorded is correct.

The witness then withdrew.

The JUDGE-ADVOCATE. I ask that the court be cleared.

The court was cleared, all persons except the members of the court and the judge-advocate withdrawing.

The court was opened, and the stenographer and Captain Sigsbee entered.

The JUDGE-ADVOCATE. Captain Sigsbee, the court was cleared in order to permit me to tell the court what steps I had taken to ascertain what mining had been done in the harbor of Havana, and the difficulty experienced in obtaining any testimony on that subject; also to submit to the court certain letters, which can not be used as evidence, but which also bear on the same subject, and to receive instructions of the court in regard to this matter.

The court (at 12 o'clock noon) took a recess until 1.30 o'clock p. m.

The court reassembled at the expiration of the recess.

Present: All the members, the judge-advocate, the stenographer, and Captain Sigsbee.

Ensign POWELSON appeared before the court.

The JUDGE-ADVOCATE. Mr. Powelson, is the testimony given by you as recorded correct?

Ensign POWELSON. I wish to make the following corrections in the testimony:

On page 27 insert the words "top of the" before "conning tower."

On page 28, in the fifth line, strike out the word "port." In the fifth line from the bottom, the sentence should end with "up." In the fourth line from the bottom add: "From port to starboard," after the word "sheared."

On page 30, third line, change "the" to "a."

On page 32, first line, change "one" to "the," making it read "name of the diver."

On page 33, sixth line, "better" should read "battered."

On page 35, the first one in the first line, "turret," should be erased. In the seventeenth line "exploded" should be "burst."

On page 36, fifth line, "five inches" should be "twenty inches." In the twelfth line the words "with one end of" should be erased.

On page 39, fourth line, change the phrase "at port crane" to "and port crane." In the fourteenth line, change "quarter" to "protective."

The JUDGE-ADVOCATE. Is your testimony as now changed correct as recorded?

Ensign POWELSON. Yes, sir. I have with me now the other sketch which I was directed by the court to make.

The JUDGE-ADVOCATE. If the court please, I ask permission to append the sketch produced by the witness to the record.

(Said sketch is appended hereto, marked E.)

SIGMOND ROTHSCHILD appeared as a witness before the court and was sworn by the president.

Examined by the JUDGE-ADVOCATE:

Q. Please state your full name, residence, and business.

A. My full name is Aigmund Rothschild. My residence is in Detroit,

Mich. My business is packing tobacco on the Island of Cuba, being here since 1871.

Q. Were you in Havana on the 15th day of February when the *Maine* was blown up?

A. I was.

Q. Where were you?

A. On the *City of Washington*, coming that evening.

Q. How far was the *City of Washington* from the *Maine* at the time of the explosion?

A. I can not give the exact distance, but I asked Captain Stevens, captain of the *Washington*, what distance he would call it, and he said about 300 feet.

Q. Where were you at the time it happened?

A. Right on the stern of the boat, and for the following reasons: Let me explain, gentlemen. We were only 17 passengers, and after the *Washington*, which came in about 8.30, had received her place, all the other passengers went down to take beer. They invited me and I said I wouldn't drink any, and my friend who is upstairs, Mr. Wertheimer, also said he would not drink any. We were sitting then in the smoking room. This was about 9.30. I said, "Let us go to the stern of the boat and watch the *Maine*." I made a joke about it. I said, "We are under the guns of the United States; we are well protected, and we can sit here." The chairs were sitting in the center of the open place aft, and we wanted to pull the chairs toward the bench, toward the railing. In doing so, I had brought my chair just about in this condition [indicating], and had not sat down when I heard a shot, the noise of a shot. I looked around and I saw the bow of the *Maine* rise a little, go a little out of the water. It couldn't have been more than a few seconds after that noise, that shot, that there came in the center of the ship a terrible mass of fire and explosion, and everything went over our heads, a black mass. We could not tell what it was. It was all black. Then we heard a noise of falling material on the place where we had been, right near the smoking room.

One of the lifeboats which was hanging had a piece go through it and make a big hole in it. After we seen that mast go up, the whole boat lifted out, I should judge, about 2 feet. As she lifted out, the bow went right down. It didn't take a minute after the lifting of the boat until the bow went down. We stood spellbound, and cried to the captain. The captain gave orders to lower the boats, and two of the boats which were partly lowered were found broken through with big holes. Some iron pieces had fallen through them. Naturally, that made a delay, and they had to run for the other boats, or else we would have been a few minutes sooner in the water. Then the stern stood out like this, in this direction [indicating], and there was a cry from the people "Help," and "Lord God help us," and "Help! Help!" The noise of the cry from the mass of human voices in the boat did not last but a minute or two. When the ship was going down, there was the cry of a mass of people, but that was a murmur. That was not so loud as the single voices which were in the water. That did not last but a minute, and by that time we saw somebody on the deck in the stern of the ship, and it took about a few minutes when the boats commenced to bring in the officers. We took them to our rooms. A great many of them came without anything on but a pair of pants and nothing else. That is about the whole story in regard to the shot.

To prove to you, gentlemen, about that shot which was heard, the gentlemen who have gone on to Mexico in the same steamer, they were

inking beer, and they were about as far from the portholes as this ould be [indicating]. They heard the shot first, and the shot brought e gentlemen sitting on this side of the table immediately to the port-le. Then the fire came out of the center. So the shot was heard by eryone, as we stated that night in the papers. It was a shot similar a cannon shot. I do not know what it was, because I am used to s island, and I know at 8 o'clock they fire a shot. This was about 5 or 9.40, and it was an unusual time for hearing a shot. If it had n about 8, I would not have been looking around, because every ht we hear that here; but being an unusual hour I looked around, l I saw the upheaving bow of the *Maine*, just a little, not very much; the next minute the middle section commenced to go up. She com-nced to go down, and in less than a minute after the upheaving she s down in the water.

Q. Which side of the *Maine* was toward you?

A. We were lying in the same direction; that is to say, when we sat the stern we looked at the stern of the *Maine*. Our boat lay pretty r in the same direction. I looked out from the stern to my right s.

Q. You mean the *Maine* was pointing right toward you—the stern of ?

A. No.

Q. Which side of the *Maine* was toward your vessel?

A. The right.

Q. The starboard side?

A. Yes, sir.

By the COURT:

Q. You were lying here somewhere [indicating]?

A. Yes; just like looking in this direction, on this side [indicating].

Q. You were looking toward the port side of the *Maine* then. Were on the Morro Castle side of the *Maine* or on the other side of the *ine?*

A. We were on the side away from Havana. If this is the bow dicating] this is our boat. I was looking from here to here.

Q. Then you were looking at the port side of the *Maine?*

A. Whatever you call it. I am not a good sailor. I must make that ifession. I was looking from this stern to this stern [indicating]. re is where our stern was, and I was standing about here [indicat-]. Here is the place where I stood. That is the smoking room, and s is where all that stuff fell down, the iron; and here, a little nearer engine room, was where the engineer was sitting when that cement l. Have you seen that?

Q. We have heard of it.

A. It is kept by the engineer for me. He says he will bring it back m Mexico. It broke a chair and made a large hole through the deck. is a large piece. I think it must weigh about 30 pounds.

Q. How thick was the cement?

A. The cement was about 2 inches in thickness.

By the JUDGE-ADVOCATE:

Q. When you heard that first explosion, did you feel any vibration on rd of your own vessel?

A. No, sir; none—nothing but hearing it. There was no feeling at all.

Q. Did you feel any vibration when the *Maine* blew up?

A. I did.

Q. You are certain there was a distinct interval between the first shot and the blowing up?

A. Sure, because it was the shot which made me look first in that direction.

Q. Which side of the *Maine* did the explosion seem to come out of?

A. This we will call the *Maine* [indicating]. The explosion came about here. Take that as the entire boat. There is where it came [pointing at about the middle of the *Maine*]. I am positive, because I saw the whole width of it.

Q. Was it on the side toward you or away from you?

A. On our side. The whole mass came over our heads.

Q. On your side?

A. Yes, sir.

Q. Will you tell us whether you saw anything going up in the air which exploded after it got there, like rockets?

A. No, sir; nothing exploded in the air, because we would have seen everything. Nothing exploded. It was merely a dropping against our boat. It came over our boat and on our boat, but nothing exploded after it went in the air.

Q. At the time of the first report, or at the time of the second explosion, did you see any water flying up?

A. From the boat, nothing, except when the *Maine* went down. Then there was a splurge of water from the lurch of the boat.

Q. You saw no great upshoot of flame at the second explosion, either?

A. No; the flame came after, more like a burning fire flame. It was an explosion which showed that it was fire, you know, but not that flame which we seen afterwards, burning for hours—what we call a flame. It was an explosion, and it ended with that and set it on fire afterwards. This ship was burning until 2 o'clock in the morning.

Q. That is, the explosion made no great illumination?

A. No, sir.

Q. This upheaval caused by the second explosion was limited, you say, to that portion of the ship which you have marked out there?

A. No; the first shot I heard I saw the upheaval here at the bow—not a great deal. When the second explosion came the whole of it was raised, only less from the stern, and immediately she went down just as fast as she could.

The JUDGE-ADVOCATE. The forward half of the ship?

A. Yes, sir.

By the COURT:

Q. Did that extend clear across the ship?

A. Naturally, we couldn't tell from the masses and from the fire how far it extended on the other side, because we were on one side of it; but it looked as if that whole center here was torn out, from the place where I looked at it. Whether there was anything untouched here [indicating] we couldn't see it from this end. It was impossible, because on this end everything came out clean, so that the whole surface was taken out. We couldn't tell from our side exactly how much it took out.

Q. In regard to the interval of time between the first explosion and the second, did you do anything which would enable you to make a measure of that time?

A. No; and I will tell you why. When that shot, or that noise, was heard, it gave me merely time to look around to see where it came from. It was night on the water, and I couldn't tell. I just turned my eye

around, and by the time I turned my eye around this explosion commenced to come.

Q. One or two seconds only?

A. Not more than few seconds, just as a man could look around. It would only take a few seconds.

Q. A second is a long time under such circumstances.

A. I know what seconds are since that time, when we were getting our boats down to help the people that were drowning. I know what seconds are since that time. I never knew it before. The noises of these two explosions had no connection, but they were two distinct things. That is to say, the noise and the fire did not come together. First was the noise, the shot, and when the shot was over, then this explosion took place.

Q. You saw the ship move at each one of these explosions?

A. At the first shot the bow of the boat just lifted about that much [indicating]. At the second one it was more of an upheaval of the hull, with the exception of less here at the stern. Then the bow went straight down like this in this direction [indicating].

Q. The people on board the *Maine* were quiet before this?

A. They were all down stairs, with the exception of Mr. Wertheimer and myself, only two.

Q. I mean on board the *Maine?*

A. Perfectly quiet. We even made the remark how quiet everything looked on board of that vessel.

Q. You saw no strange boats about her?

A. Not from our side, and it was pretty well lit up, if everything could have been seen. We were interested because we had just arrived, and having read so much in America about the *Maine*. We were interested to inspect the boat, not to look for any strange thing; but we saw nothing under the boat or near the boat. When we came in, all these harbor boats were on the other side of the *Maine*, up toward this part of the city [indicating]. The ferry which runs from here to here [indicating] was taking her regular course amidst all the cry. She was right here then and she did not come to help. The ferry runs across from here to here [indicating]. I went to Captain Stevens and I said: "For God's sake, can't you holler to that boat to go nearer?" Naturally, being in midstream, I did not expect she would with a lot of passengers, because it looked threatening with that stern part out, as if another explosion might happen; but after she had taken her passengers off she had ample time to go to their assistance before we could get there. She was under steam and she ran steady. Those boats run steady.

Q. The Spanish man of-war in the harbor did send boats?

A. Oh, yes. By the time our boats were in the water we saw the flash light coming toward the *Maine* and their boats were ahead of the light, so they came immediately. They also got a big piece of iron, which fell on our boat, which was used for binding the boat together on both sides.

Q. An angle iron?

A. An angle iron. That also fell on our deck.

Q. Did you notice any very large pieces of iron plate that were torn off or thrown up?

A. No, I did not see any large pieces. I saw a big bulk flying. It didn't look like heavy pieces. It might have been a human body, because everything that came over us looked dark. We saw large pieces of timber in front of our vessel which flew against it, but nothing you could see with your eyes, because it was so glaring on account

of this explosion when it went up that you could see nothing until it went over, and then you could see it as a mass and not as an article which was lit up. You could see it as a dark mass.

Q. Some of the pieces, you think, went over the *Washington*?

A. I am sure they went over our heads. You see, this stern of the *Washington* is pretty clear. Everything would go over, while here in front they would fall against something. We were sitting back of the cabins, which was a large space free from the deck, and everything went over us; some of them went not more than about 10 or 12 feet over us; the others went very high, but you could not tell what it was, except it was a dark matter. There was afterwards many single shots going off; that kept on for hours afterwards until about 2.15 in the morning, but it was nothing like an explosion. It was single pieces of something going off, that stopped right there.

Q. Did you notice anything flying aloft when the first shock was heard?

A. No.

Q. Nothing flew up in the air?

A. Nothing flew up in the air. I looked around. I thought the shot may have come from something else. If anything flew up I would have seen it; but my eye went not alone to the boat but went all over, to see where that shot could have come from. Nothing went up, because my eye was directed the moment the shot was heard. I saw no commotion, no lurch, like this [indicating]; just a little lift. Then came the explosion, which gave the whole mass a lift.

There being no further questions to ask this witness, his testimony was read over to him by the stenographer and by him pronounced correct.

The witness then withdrew, after being cautioned by the president of the court not to converse about matters pertaining to the inquiry.

LOUIS WERTHEIMER appeared before the court as a witness and was duly sworn by the president.

Examined by the JUDGE-ADVOCATE:

Q. Will you please give your full name, residence, and what business you are in?

A. Louis Wertheimer; business address, 148 Water street, New York; private address, 133 West Ninety-third street, New York City.

Q. What business are you engaged in?

A. Dealer in leaf tobacco.

Q. Were you in the harbor of Havana on the 15th day of February when the *Maine* exploded?

A. I was a passenger on the *City of Washington*.

Q. How far was the *City of Washington* from the *Maine* at the time?

A. I should judge between 100 and 125 yards.

Q. Where were you at the time of the explosion?

A. At the actual moment of the explosion I was in the stern of the *Washington*, having left about halfway between the smokestack and the chief engineer's cabin, where I was standing talking with Mr. Rothschild, to take a seat on the chairs which were on the stern of the *Washington*. We left our post because there were no chairs there, and when we reached the stern of the boat and had just taken hold of the chairs to move them out from the center of the vessel the explosion occurred.

Q. Then the *Maine* was in full view of you at the time.

A. We were looking directly at her at the time.

Q. On which side of the *Maine* were you looking?

A. We were on the starboard side of our boat—the stern starboard side—and we were looking at the *Maine*.

Q. The *Maine* was abreast of you?

A. I should judge she was parallel to us. The same tide must have put her in the same position we were in.

Q. Please tell us what you felt and saw.

A. We heard a report.

Q. You?

A. I heard a report, a minor report, minor in comparison with the greater report which immediately followed, and at an interval of anywhere from five to fifteen seconds following this first minor report came a great explosion. We saw an upheaval, and the air was black with flying objects which we could not distinguish, but there were sufficient of them to blacken the sky. In the same burst of flame which followed this immense upheaval I saw, clearly and plainly, the vessel rise in the water a distance which apparently was 3 yards, but which in reality must have been greater, and then settle down before the light of the explosion went out. The whole thing was over so quickly that I could not hazard a guess at the time, but suffice it to say that in the burst of flame which followed the upheaval of this flying mass I saw the vessel settle in the water.

Q. Do you say you noticed an upheaval at the first explosion or first shock—an upheaval of the vessel?

A. As closely as I can say, I should say the upheaval followed the flying objects—either that or simultaneously. The time was so very, very short between them, if there was a difference between the rising of the vessel, the upheaval of the vessel and the upheaval of the objects flying in the air, that it would be difficult to mark it.

Q. I am now referring to the first shot you heard. Did you notice any movement of the *Maine* together with that?

A. No; not at all; and bear in mind that the interval was very, very short between the first and the great explosion.

Q. You probably meant, when you said from five to fifteen seconds, less time than that, if you count in your own mind how long five seconds would take.

A. Let me see how long five seconds actually took and I can judge better. [Witness examines his watch.] It certainly was less.

Q. Less than five seconds?

A. Yes, sir; it certainly was less.

Q. Did you feel any shock aboard the *Washington* at the first explosion that you heard?

A. No, sir.

Q. Did you at the second?

A. Yes, sir; decidedly—a strong tremor running through the vessel.

Q. Did you see any shell explode in the air at this second upheaval?

A. No; nor was I looking upward at the time. My eyes were fixed upon on what was left of the *Maine*—the deck—settling in the water. I didn't look in the air at all. I have heard it said here that people in the city saw a great burst of colored lights in the sky, as though signal rockets were exploding there. I saw nothing of that from the *Washington*, because my sight was not fixed in the sky. It was fixed on the vessel itself—the hull.

Q. Had you been looking at the *Maine* for some little time previous to this?

A. Fully ten minutes.

Q. Did you see any boats around her?

A. Nothing; but the night was very dark. Between the time that the cornet—I took it to be the cornet—sounded on the *Maine* and the extinguishing of lights at the explosion there was very little light in the bay. It was a very, very dark night, so much so that Mr. Rothschild, myself, and another passenger were discussing the color of the *Maine*, whether she were white or gray.

Q. There were some electric lights showing on board the *Maine*, though, were there not?

A. When we entered, yes; as we came up to our buoy there was a great deal of light. There seemed to be a good deal of moving about. We heard a concertina playing when we moored, which was all previous to the cornet sounding.

By the COURT:

Q. I would like to ask if, on thinking it over, there is in your mind any confusion between the upheaval of the ship following the principal explosion and the fact that she immediately went down?

A. Will you repeat that question, please. I didn't quite catch it.

Q. You say when this explosion took place, either simultaneously or instantly after, you saw the vessel rise in the water?

A. Yes, sir.

Q. You should say at least 5 feet?

A. Yes, sir.

Q. Of course she immediately stopped and went down entirely under the water?

A. Yes, sir.

Q. Do you suppose that if she had simply gone back to the position from which she started, it would appear in your mind to be as much as 5 feet that she rose out of the water?

A. I think she raised more than 5 feet. I say it was what appeared to me to be 3 yards—9 feet—but I think in reality it must have been more, judging from the size of the vessel. She certainly settled deeper when she came down after being heaved up than she had been originally.

Q. Yes; she went entirely under the water then.

A. Yes; she settled immediately in the water.

Q. You think it was as much as 9 feet that she was raised?

A. I should estimate it at that; yes, sir.

Q. What part of the ship was it that was lifted so much?

A. The part that was nearest to us, which was the part we were looking at. It must have been her stern, because her stern was probably parallel with our own.

Q. Whereabouts did this explosion occur with reference to the *Maine*?

A. In what part of the *Maine*?

Q. Yes.

A. That would be very difficult for me to say, because I am not familiar enough with the ship. It looked to be rather more forward than the middle of the ship.

Q. Was it that part of the ship that was lifted out of the water?

A. No; not the part that I refer to as being lifted out of the water, because what I saw lifted out of the water must have been her stern, being the nearest to us, while the part that exploded was farther away from us.

Q. Was not this lifting of the stern due to the fact that the bow was depressed?

A. That I couldn't say.

Q. Just as if this [indicating] was the bow of the ship, and the explosion took place here forward of the center, could the raising of the stern be due to the fact that this end went down?

A. No, sir; it was too quick for that. It was too sudden a lift. It must have been an independent force that lifted that hull as I saw it lifted. It could not possibly be the depression of the forward end raising the hind end, because that would result in a gradual motion, and this was a decided lifting up.

Q. Could not that [indicating] have been the portion of the ship where the explosion took place?

A. No; the explosion was forward of the stern which I speak of seeing raised from the water.

Q. That part which was raised was to your right hand as you looked, was it, or to your left hand?

A. To the right. We were lying reversed from this, were we not, with the stern to the mouth of the bay?

Q. The *Maine* is lying now just as she was on that occasion. You were on that side of her, looking this way, and the stern was to your right hand.

A. Yes, sir; the stern was to our right hand.

Q. It would depend on how you were facing yourself; but the explosion was to your left, if you were not looking directly at it?

A. We were looking directly at her, though.

Q. Then the explosion was to the left end of the part you saw raised?

A. I really can not agree with you on that, because I take it that we were looking immediately at her. She was in front of us. We were facing the vessel directly. Supposing that she was lying parallel to us—yes, you would be right, it would be to the left then. I should prefer, as a layman, to omit the words "bow" and "stern" because I distinctly say that part of the vessel nearest to us. I was standing on the stern of the *Washington*. That I can say positively, but I can not say positively which was the stern or bow of the *Maine*. I simply take it for granted that she was lying parallel to us, and that the same tide that swung us swung her.

Q. Suppose this is the *Maine* [illustrating]. Instead of lying in that position, she might have been lying in that position [indicating]?

A. We looked to that part of the *Maine* which was nearest to us, and we were on the stern of the *Washington*.

Q. If you were looking right opposite you, and she was in that position, then it was the part you were looking at that was raised?

A. Yes, sir; decidedly and emphatically.

Q. That is the bow of your ship [indicating]. Did the *Maine* appear in that direction or in that direction [indicating]?

A. That I didn't notice.

Q. For instance, as you stood on the deck of the *Washington*, was your head turned somewhat toward the bow of the *Washington*, or were you looking over the stern somewhat?

A. Somewhat astern; yes, sir.

Q. In other words, there would be the *Maine* and here would be the *Washington* [indicating].

A. If this was our ship, my line of vision, more or less, was directed in this direction [indicating]. The *Maine* was to the right of us. That part I am reasonably positive of.

There being no further questions to ask this witness, his testimony

was read over to him by the stenographer, and by him pronounced correct.

Lieutenant-Commander Wainwright asked permission at this point to be present, and permission was granted.

Gunner CHARLES MORGAN, U. S. Navy, appeared as a witness and was duly sworn by the president.

Examined by the JUDGE-ADVOCATE:

Q. Please state your name, rank, and present duty.

A. Gunner Charles Morgan, serving on board the U. S. S. *New York*, of Key West, Fla. I am on duty here, diving.

Q. Have you personally done any diving about the wreck of the *Maine*?

A. Yes, sir.

Q. How often have you been down?

A. I was down once.

Q. How long did you remain down?

A. An hour and twenty-five minutes.

Q. Will you describe to the court, from your own knowledge, what you yourself saw and felt, the condition of the wreck of the *Maine*, and anything you may have discovered down there of importance.

A. On being dressed and going down the ladder and lowered down to the bottom, I was landed among a lot of tanks, some being 6-inch and some being 10-inch powder tanks, all being empty and broken up. I also found what I supposed to be the ceiling and the linings of the magazine woodwork. Then walking around a little way from the tanks, I fell off. I landed down in soft mud. I tried to pick my way back again and I came across what I supposed to be the bulkhead. Placing my hands upon it, I found it went in, and overhauling it a little more, coming up higher on it all the time until I got to the top, I found myself back among the tanks again. Then moving away from there a little way, I found that I got among a lot of wires, which I supposed to be in the dynamo room, and also among some accumulators; and everything in the line of bulkheads and frames had a tendency of showing from port to starboard. After overhauling these frames, I started to walk away from that direction, going along a little way to the left, as I supposed it to be, and there I came across a lot of frames, as they seemed to be. They were turned up and over. A little way from there I got among the paymaster's stores, canned wet provisions. In turning around again, I began going back toward the same amount of powder tanks—the empty tanks. Being satisfied I was around the 10 and 6 inch tanks, I had the signal to be called up.

Q. You say the tanks were empty and broken. Broken in what way?

A. Some were just split and others had their heads off, and others were just simply pressed down; some had the impression of the powder showing on them.

Q. Did many tanks appear to have been burst open by the charge inside of them having been exploded?

A. Not so many as those which appeared to be just split open.

Q. Would the brown powder, exposed to constant weather, like the powder aboard the *Maine* has been exposed in an open tank, be likely to melt out?

A. Yes, sir.

Q. Dissolved?

A. Yes, sir.

Q. And some of these tanks might have been full at the time of the sinking, and the powder has since been dissolved and leaked out?

A. Yes, sir.

Q. Will you explain what you mean by saying the frames went from port to starboard?

A. I would say that the edges of what I supposed to be frames that held the bulkheads and things of that kind had a tendency of being turned over from port, facing down to starboard, from left to right. They had a curve.

Q. Are you fairly well acquainted with the construction of the *Maine*?

A. Not very well. I have been on board of her two or three times.

Q. You have looked at the plans since you commenced diving?

A. Yes, sir.

Q. Where do you think you were when you struck all these tanks?

A. I thought I was forward of the boilers and in around the hydraulic pumps. I ought to have been.

Q. Did you ever explore what you consider to be the outside of the ship?

A. I was down in the soft mud there, but I suppose I was on the outside.

Q. What is the condition of the port side of the ship?

A. The place I was at was all gone.

Q. Perfectly open to port?

A. Perfectly open, except little ragged edges from the pieces there on the bottom?

Q. Did you touch the starboard side of the ship at all; did you reach that?

A. Just on the starboard side, over the 10-inch magazine. That was all.

Q. Did you touch the starboard side?

A. No, sir.

Q. It has been stated in this court by another witness that you fell into a hole. What about that?

A. There is a space there where it is deeper than any other place. That is where the soft mud is.

Q. You could find no bottom to that hole at all?

A. Yes; there is bottom there.

Q. How far did you get in?

A. About half waist. Near the armpits.

Q. What was the nature of the hole? Did you find the boundaries of the hole at all?

A. No; it is an open space, very soft, slushy mud.

Q. But you did not touch the edges of this hole?

A. It is simply an incline, but nothing to make a round hole.

Q. You do not know how big the hole was then?

A. No, sir.

Q. You do not know how the metal was bent at the hole?

A. There was no metal at the hole.

By Captain SIGSBEE:

Q. Do you know whether you reached the outside shell of the ship anywhere?

A. I couldn't say, sir.

By the COURT:

Q. You spoke of being among the 6 and 10 inch powder tanks when

you first went down. How many powder tanks do you estimate you found?

A. I would say there were at least from 20 to 25 there, sir.

Q. If the powder had dissolved and leaked out of the tanks, would not the powder bag have been left intact in the tank?

A. It would depend if they were cut and jammed in the tank. We found pieces and brought them up to the surface. If they were not cut, they would be found in the tank.

Q. Where would they go?

A. Down there among the wreckage.

Q. Do you think powder would dissolve sufficiently to entirely leak out through the cartridge bag?

A. If it was broken and crushed—yes, sir.

Q. But if the cartridge bag were not broken?

A. It would stay in the tank, just the same as the 10-inch, if it was not broken, but it would dissolve.

Q. Did you find any powder cases that were full and closed tight?

A. At the time I was down?

Q. Yes.

A. No, sir.

Q. You said in answer to a question as to where you were when you found these powder tanks, that you thought you were in the hydraulic room?

A. Because the accumulators were there, and also the position of the accumulators, and the magazine would make it around that room, near the 10-inch magazine.

Q. But the hydraulic room is over the magazine?

A. Yes, sir; but the lining of the top floor and the magazine all being broken open, just as though it had been crushed up to the woodwork and sticking out, the woodwork being tongued and grooved, and the woodwork leaving an open space there, showed the accumulators lying around.

Q. I am referring to the powder tanks. I asked you where you were when you found these tanks. You said you were in the hydraulic pump room. Is it possible that during all the time you were down you had not been as low as the magazine?

A. I am quite sure I was as low as the magazine, because no wood of that kind would be down there below that deck.

Q. Were you ever in her magazines when she was in order, before this occurrence?

A. No, sir; I never was in her magazines. I took special notice of it when I struck it, knowing that that was something strange to be down there. I put my hands over it and noticed it particularly, and found it was an inch thick. Then I put my hand right along and noticed it was a part of the flooring. Then when I came across these other things together it led me to understand I was at the magazine.

Q. How could these powder tanks have been in the hydraulic room?

A. There probably being no solid deck there, probably they got down in below there. The accumulators were right around in that surface, and they were secured to that after bulkhead above the magazine.

Q. But they were not in the hydraulic room?

A. No, sir; they were all around the magazine at that time.

Q. They just dropped down into the magazine. Is that it?

A. Yes, sir; they just dropped down in there.

By Captain SIGSBEE:

Q. Do you find any 10 or 6 inch shell below?

A. There were four 6-inch shell lying there. The man wanted to hook them up, and I told him not to, because we didn't have men to haul them up. He also put a 10-inch shell on.

Q. Was this your own experience when you went down under the water?

A. No, sir.

Q. You did not find any shell yourself, individually?

A. No, sir.

There being no further questions to ask this witness, his testimony was read aloud to him, and by him pronounced to be correct, and having been cautioned by the president not to discuss matters pertaining to the trial, he withdrew.

Chief Gunner's Mate ANDREW OLSEN, U. S. Navy, appeared as a witness and was duly sworn by the president.

Examined by the JUDGE-ADVOCATE:

Q. What is your name, rate, and to what ship are you attached?

A. My name is Andrew Olsen, chief gunner's mate, U. S. S. *Iowa.*

Q. Have you been sent over here for the purpose of doing diving duty on the wreck of the *Maine?*

A. Yes, sir.

Q. How many times have you been down?

A. I have been down four times.

Q. About how many hours in all?

A. About eight or nine hours, I guess—around there. I couldn't say exactly how many.

Q. State to the court your own experience while under water, as far as the condition of the *Maine* is concerned, and any discoveries of any importance that you may have made while under water yourself.

A. The first time I went down, I went right down over the forward part where she was blown up, seemingly over some fire rooms. I found the wreck all blowed up. I found a lot of grate bars down there. The second time I went down, I went down farther forward. I struck a lot of 10-inch shells. Forward of the 10-inch shell, the plates were bent right inboard over them.

By the COURT:

Q. Forward of the shell?

A. Yes, sir; forward and outside of the 10-inch shells. Some of the shells are laid with the point of the shell pointing up. Some are armor-piercing shell and some are common shell. The points of some are standing up and some are lying down. Right forward and to the left of them, and seemingly on the left side of the shells, there are plates bent inboard over the shells.

Q. You imagine yourself looking forward?

A. Yes, sir. Going over them plates, I struck into a lot of 6-inch shells with their slings on them. Then going to the right from there over in that direction [indicating], I found a lot of wreckage over that way. It seemed blown over to starboard. I put my hand in some of the cracks and pulled out some 6-pounder shells. I pulled out one complete 6-pounder cartridge, shell, and all, and one shell that was all blown up—all of them 6-pounder cartridges.

The next time I went down I went right down outside the ship, right forward of the crane on the port side. I followed the bottom along. The ship's side was blown outward, and right alongside the crane you can walk on it. Following the ship's side from there forward, the ship's

side seemingly goes into shape again. You come to the part where she is blown up completely. Then part of her bottom plates are turned up. Then you follow the bottom from there up and the plates are blown outward. At the top and underneath the bottom they are blown inboard like that [indicating]—bent in. About 3 feet forward of that there is a piece of iron laid along, seemingly the bulkhead. The skin of the inside of the double bottoms is curled over like a sheet of paper inboard, from stem to stern. Right in amidships on the same place there is an armor plate, one plate complete, the top of the plate standing up.

The plate is inclined over to starboard. It is laid over to starboard completely. It stands up with the thick part of the plate down. It is inclined forward, like that [indicating], and over to starboard—one whole, complete plate. The thickness of the plate on top is 7 inches exactly. I measured it. On the forward part of that plate is wooden backing, and forward of that wooden backing there is a thin sheet of steel, and the bolts holding the armor plate into the backing are there, two of them. I felt them. I could feel the hexagonal ends, with washers. Whether they are rubber or leather washers I couldn't say. I couldn't see them. I could feel them underneath those ends; and that place extends over to starboard about the midship line of the ship. Inside the 10-inch shell room, seemingly, where all those shells are, I found a lot of empty tanks. Some of them were small pieces—three or four small pieces there which I couldn't get hold of. Most of the tanks are cracked right in the seam, and there are some 10-inch leaves or parts of tanks in there in amongst the shells. Right over this place that is bent in by the 10-inch shell room there seemed to be the frame of the ship, standing up and bent inboard on the port side.

On the edge of this armor plate, on this thin sheet of steel that is inside of the backing, you can see the rivet holes, and seemingly some kind of an angle iron inside this steel. You can feel the rivet holes on the edge of it. If you follow this armor plate you do not strike anything at all. Everything is completely blown away. There is nothing but the bare bottom, mud. If there is anything in the mud I can not find it, because it is so deep down; but I have been trying to dig down as far as I could. I have been down about five feet in the mud, digging and scraping.

By the JUDGE-ADVOCATE:

Q. Whereabouts on this plan would you put that armor plate? Here is the shell room, you see. There is the 6-inch spare magazine and here is the 10-inch powder magazine.

A. This plate would be around here [indicating].

Q. At the after end of that shell room?

A. Yes, sir.

Q. To the port of the midship line?

A. Yes, sir; port of the midship line. May be it might be a little over on the midship line; but if it is, it is not much.

Q. Near frame 30?

A. Yes, sir.

Q. Where did you find the skin of the double bottom turned up and in?

A. A little abaft here, seemingly.

Q. A little abaft of frame 30?

A. Yes, sir; a little abaft this armor plate—a few feet abaft it.

Q. How far out from the middle line of the ship would you estimate it to be—half way, or two-thirds of the way to the side?

A. I should judge it was about here [indicating].

Q. About two-thirds of the way from the middle line of the ship?

A. Yes, sir.

Q. At frame 30?

A. Yes, sir.

Q. Where did you find the bottom entirely blown away?

A. Right about here [indicating].

Q. Between frames 24 and 28?

A. Yes, sir. This armor plate, I should judge, would be about here [indicating]. The bottom seems to be gone there.

Q. How about these shell? Are those shell there still?

A. Yes, sir; there are some shells right in the after end of it, I judge, right here [indicating].

Q. There are no shell in the forward end?

A. No, sir; not there, but right over here, seemingly. At those shells the plates are bent in over them.

Q. That is on the port side of the shell room the plates are bent in over the shell?

A. Over the shells; yes, sir, and right over here [indicating], that is where I found some tanks broken up. About here, I should judge about the end of the ship's bottom, that is the part that is blown out. You can walk in on it.

By the COURT:

Q. In speaking of being able to walk on the top of the plate——

A. The plate seemed to be flat, like that [indicating], and I could walk on it.

Q. Was there nothing above that?

A. No, sir.

Q. How deep was that under water?

A. I judge between 4 and 5 fathoms—about 5 fathoms, I think.

Q. Pretty well down toward the bottom?

A. Yes, sir.

Q. That would be from frame 36 to frame 41?

A. I walked on them, and then they began to take their proper shape again. As you feel the bottom up, you can feel the shape of it. I crawled over in the mud, and that is where I found the plate bent up—the bottom plate, the bottom of the ship, bent up. As I walked in a place higher up I found them bent out.

Q. But under the bottom, about in the vicinity of the 6-inch spare magazine, they were bent up?

A. This place must be abaft here [indicating].

Q. That is between frames 30 and 32?

A. About here there is a space that is nothing.

Q. What I am trying to get at is where you found the bottom of the ship bent in?

A. That is where I found it, right about here [indicating].

Q. Between frames 30 and 32?

A. Yes, sir; right abaft where this armor plate is.

Q. How far out from the middle line of the ship?

A. I couldn't say exactly how far from the middle line of the ship on account of I could not get underneath the mud far enough to tell the middle line on that part.

Q. Was it a hole blown into the ship, apparently?

A. In most places the plate is cracked off, spread in ragged edges, and in three or four places the plates are bent in like a curve. Then as far as you go up the ship's bottom from there up, she is bent out that way [indicating].

Q. I will draw a little sketch here to indicate what I mean. That is the ship's side [indicating]. Do you mean that is bent in so here and out so here?

A. This plate I am talking about on the bottom is complete, like that [indicating]. There are no holes through the bottom at all. It is just the edge where, seemingly, it has been blown apart, and here the plates are bent in, curved in a little, and up here they are bent out on that side like that [indicating]. They seemed to be about that curve. That is about the curve of the bottom itself, right there.

Q. Is there not a hole blown through?

A. No, sir; it is no hole. It is a ragged edge which is bent out. From here aft the bottom is whole [indicating].

Q. What do you mean by bent in? Is it simply a depression or a hole?

A. It is no hole. It is a curve. The plate is warped like, like some external force drove it in like that [indicating].

Q. You did not find a hole?

A. No, sir; no hole, not in that part. From here aft the bottom is complete as far as you can see for the mud. Where I struck those 10-inch shells there are plates bent in like that right over them. You go down like in a little hole and find plates over you like that [indicating]. You can stand right underneath that plate. It is bent from the outboard in, over the starboard, and the shells are down below. I tried to dig down underneath the shells; but if there was anything underneath in the bottom I could not find it. I couldn't get below them. If you go away over to starboard like that [indicating], you strike mud again. There is nothing there. Then you go over where this plate is. You can climb over that until it is bent over like that [indicating], and you go down into some 6-inch shell. That is seemingly outside of this outboard plate, which is bent over like that. Going from that place over there [indicating], there are some pieces of wreckage. Then there is a lot of wreckage blown over to starboard. Then underneath of that I put my hands way underneath. I couldn't get my body in there. I pulled out two 6-pound cartridges.

Q. What was the condition of the tanks?

A. The majority of the tanks—I found a few pieces blown up entirely—that is, small pieces left of the tanks; but the majority of the tanks I seen down there were split in the center—that is, the seam of the tank was split, just melted away like.

Q. Can you imagine a 10-inch charge bursting inside of a tank? Would they look like that?

A. If a 10-inch charge burst inside of a tank, there would be nothing left of the tank. It would be blown into small pieces.

Q. Did you bring up any tanks?

A. Yes, sir.

Q. What did you bring up?

A. Six-inch and 10-inch tanks.

Q. Describe fully the condition of those tanks.

A. The 6-inch tanks I brought up were corrugated, the outside of the tanks, and the seam was split. The tank, seemingly, was not hurt, merely the seam being split, and the whole tank was corrugated.

Q. Crushed in?

A. No; corrugated, in waves like; the whole tank itself on the outside.

Q. Was it empty?

A. It was empty; yes, sir

Q. Were both cylinder heads on?

A. No, sir; the top was out of one of them. In fact, I didn't fetch up the whole tank. One of the tanks I fetched up the lid was on it and the bottom was out of it. It was corrugated and split up. Then I fetched up a 10-inch tank that was merely the sheeting of it. The lid was gone and the bottom was gone, and the tank was all bent in as though it struck some place and was doubled out of shape. In the fire-room, or where the fire-room had been, where I found those grate bars, I found a couple of tanks.

Q. Were they full or empty?

A. Empty.

Q. Apparently blown to pieces by a charge inside?

A. No, sir; not blown to pieces. They were ripped, the same as the rest of them, in the seam.

Q. You have given considerable testimony according to your best knowledge and belief, as you have sworn. Do you think that all you have stated is quite correct, or do you imagine considerable of this? You know you are not supposed to be as good a judge under water as you are above water. Above water I would not question your testimony at all; but do you feel positive of what you have stated here, and are you satisfied that it is perfectly correct?

A. Yes, sir. I am perfectly sure it is all correct, the way I found the deck.

Q. Are you a good diver?

A. I have had a couple of years' experience of it, sir.

Q. Do you feel comfortable under the water?

A. Yes, sir.

Q. Do you know what you are feeling when you feel anything?

A. Yes, sir.

Q. Did you have your gloves on?

A. No, sir; bare hands.

Q. You do not feel ill under water?

A. No, sir.

Q. You fully believe that what you have testified to is quite correct?

A. Yes, sir.

Q. Were you able to see at all?

A. Yes, sir; I could see, and when I was not quite sure of what I did see I used to wait until the mud cleared away, so I could see perfectly clear.

Q. Were you using any electric lights in diving?

A. Yes, sir; but the electric light was not much use to me. It merely showed a red glare, and I came to the conclusion that I was better without the light.

By the COURT:

Q. You could make out forms better?

A. Yes, sir; better without a light.

By Lieutenant-Commander WAINWRIGHT:

Q. In describing where you saw the plate blown in from the outside, was there any part of the outside of the ship above that plate? You say it did not make a hole. I want to know whether that was the upper plate, or whether there were other plates above it?

A. On the outside of this armor plate were a couple of frames of the ship sticking up, bent inboard on the outside of the plate.

Q. The armor plate I am speaking of now?

A. On the outboard port side of the armor plate.

Q. What I particularly wanted to know was this. Captain Chadwick asked you whether it was a hole or whether it was bent in, and you said it was no hole.

A. No hole.

Q. Was there anything above it; was it a plate bent in, or was it just an indentation in the plate?

A. It was a plate bent in.

Q. Were there any plates above that?

A. Yes, sir; I could feel above it something that felt like a coal bunker, above it and abaft. Where this place was bent in I found a lot of cement.

Q. We will say this was the plate bent in [indicating].

A. Yes, sir.

Q. Was that plate attached to any other plate, or was it the last plate you could get hold of?

A. It was not attached to anything.

Q. It was bent in?

A. Yes, sir; and above it there seemed to be some cement inside. I could reach away in, and then from there up was something like a coal bunker. I couldn't say whether it was a coal bunker or what it was.

Q. Did you make any effort to reach the region of the 6-inch magazine forward?

A. Yes, sir; but I couldn't get there on account of mud. To get there I will have to go on the starboard side where this 6-inch magazine was originally. Down among that wreckage is where I want to go down. Abaft that wreckage, sticking up out of the water, there is nothing but mud right beneath that.

Q. You find wreckage above where you think the 6-inch magazine was?

A. Yes, sir; it must be right where that big pile of wreckage is, over there.

By the COURT:

Q. Speaking of this plate that is doubled back over the 10-inch magazine, is that, do you think, a bulkhead, or is it the outside of the ship?

A. Over the 10-inch magazine?

Q. Yes, or the 6-inch. Which was it you referred to?

A. The 10-inch shell room. If it had been outside of the ship, I should have judged there must be green paint on it, but I couldn't find any green paint on that part of the plate. It seems to be a plate inside of the double bottom.

Q. It might be a vertical bulkhead, might it not?

A. It might have been a bulkhead or an inside part of a double bottom. It turned inward over to starboard.

Q. To have a clear understanding of where that plate was bent in, was it separated from any plate above, or was the ship's side continuous?

A. Where this plate in the 10-inch shell room was bent in?

Q. This plate you speak of. You walked forward on what had been the ship's side, bent outward? Then you came to a place where the ship's side was bent in?

A. That is on the bottom. To get into where these 10-inch shells are, I get clear of that entirely. That is above me, and I get into those 10-inch shells, and there seems to be a plate. Outside of this plate is mud, nothing but the bottom, and right over here is this plate bent in, like that. By that I mean that the ship seems to be broken off for-

rd, and a little way from the midship line the plating is bent in. gher up, in the same section, it is bent out—that is, on the cross-tion of the ship. The last plate I refer to is the one that is thrown r to starboard, over the shell, but not the bottom plate.

Q. That is, it is bent in parallel to the keel of the ship?

A. It is bent in, not exactly parallel with the ship. It is more on an gle over to starboard. Take this as the line of the ship, it is thrown r like that—thrown over to starboard.

Q. Here is the keel of the ship [illustrating with a piece of paper]; e is the magazine. Is that bent in over it like that? [Placing the ce of paper parallel to the keel of the ship on the magazine plan.]

A. No, sir; there is a piece sticking down at the bottom and bent in, l it comes up to a point like that [indicating]. That is the way it is it in. There was a vertical fore and aft plate, the lower part stuck the mud, and the top part bent over to starboard on top of the shell the 10-inch shell room.

Q. You say outside of that is nothing but the mud bottom?

A. Nothing but mud; and between this plate here and this part that blown away, where the bottom stops, there is no more bottom there. ere is a plate. It seems to lay over a part of the plate. It lays over ere this plate is bent in, and it is rolled up from port to starboard.

Q. Is that a part of the ship's skin?

A. I can't tell what part of the ship that is, sir; it is very thin plate, atever it is.

Q. Do you think the ship is cut right in two there?

A. It is cut in two from out here to pretty near the midship line, but couldn't get underneath it. I found that part is down in the mud, t from here in here it is blown right in two. That is about the bend it, like that, and here it is blown out, like that, and here it is nt in.

(Witness points to the region of the afterpart of the 6-inch reserve agazine.)

By the COURT:

Q. Do you know how many salient angles there are in a 6 and a 10 h charge as made up? You know, when you build up a 10-inch arge, it is made of a number of grains. How many salient angles there; how many edges when it is piled up there?

A. I don't know how many in a 10-inch charge. Every part of the wder comes out and forms an angle in itself. I don't know just how ny grains of powder there are on the outside of it. I don't know ctly the amount.

The PRESIDENT. The question that occurred to me was whether these rugations on the outside of the powder tank are produced by a ssure on the outside, which makes the circular section of the tank ss in to take the hexagonal form of the powder charge itself, or ether it is due, in the first place, to the first ignition of the powder, ing outward and making the tank take the hexagonal form of the wder charge. It does not look very probable that it is due to a prese from the inside, but that it is due to a pressure from the outside, in ch the hexagonal pile of powder forms the base on which the prese forces the tanks to take the same shape.

he judge-advocate requested that the testimony given by the wit-s be not read to him by the stenographer, but that he be directed eport to-morrow morning at 10 o'clock, when he will be furnished so much of the record as contains his testimony and asked to with-

draw for the consideration of the same, upon the completion of which he will be again called before the court, and be given an opportunity to amend his testimony as recorded, or pronounce it correct.

The request was granted, and the witness was instructed accordingly; whereupon he withdrew, after being cautioned by the president not to discuss matters pertaining to the inquiry.

The court then (at 4.15 o'clock p. m.) adjourned until to-morrow, the 25th instant, at 10 o'clock a. m.

FIFTH DAY.

U. S. L. H. TENDER MANGROVE,
Harbor of Havana, Cuba—10 a. m., Friday, February 25, 1898.

The court met pursuant to adjournment of yesterday, the fourth day of the inquiry.

Present: All the members of the court, the judge-advocate, the stenographer, and Captain Sigsbee.

The record of the proceedings of yesterday was read and approved.

Gunner's Mate THOMAS SMITH, U. S. Navy, appeared as a witness before the court, and was sworn by the president.

Examined by the JUDGE-ADVOCATE:

Q. State your full name, rate, and to what ship you are attached.

A. My name is Thomas Smith; gunner's mate, second class, serving on board the U. S. S. *Iowa*, lying at Key West, Fla.

Q. You have been engaged in diving here recently?

A. Yes, sir.

Q. How many times have you been down?

A. I have been down altogether four times.

Q. In the wreck of the *Maine*?

A. Yes, sir.

Q. About how long a time in all?

A. Eight hours.

Q. Are you a good diver?

A. Yes, sir; I am a fair one. I have been down lots of times.

Q. Do you get sick under water?

A. No, sir; I do not.

Q. Do you feel perfectly well?

A. Yes, sir.

Q. Strong?

A. Yes, sir.

Q. Can you see well?

A. I can see well, when the water is anyway clear, but this water is not clear. We can't see any more than about a foot or eighteen inches out from you.

Q. I want you to give certain testimony, and in giving it I want you to be sure that what you testify to is perfectly correct, and not make any guess. You will please state to the court exactly what you found under water as far as the construction of the Maine is concerned, and any other important discoveries, or any discoveries that you may have made.

A. First, when I was lowered over the side I landed into a 10-inch shell room—the flooring of it. I knew it was the 10-inch shell room, as

ıe 10-inch shells were lying there in good order. Some of them were ing with their noses up, others down. There was also pieces of the ood used as linings in the magazines lying around them. In this -inch shell room the fore-and-aft bulkhead is blown from port to star- ıard, over toward the 10-inch magazine. I crawled up and over this ıd down behind it. I found a 10-inch powder tank. It was sort of ent, but it was not burst. I didn't see it after it came up. It was ll of powder, and the bag and everything was in it, I guess. That as lying in the mud, well underneath this sheet of a bulkhead that as thrown over. Then I came up out of the water and I went down gain in the afternoon. I came down from the port crane. I followed ıe ship right down until I struck plates that were blown from port to arboard, inboard. I followed that right down until I struck the inch shells. The shells there had their slings on them—what is used r sending them up out of the shell room. They were lying with the ses of them pointing up and to starboard. The forward part of the inch reserve magazine, it seems to me, was gone altogether—com- etely blown away. The ragged edges of the shell-room steel are rned up.

By the COURT:

Q. The ragged edges whereabouts in the shell room? Do you mean the bottom of the shell room?

A. Right at the bottom of it; yes, sir. As you leave that you walk ht over into the mud. There is nothing left there at all.

Q. Going still forward?

A. Still farther forward. I came back on the wreckage, and walked r to my right, and I came across a lot of 6 pounder shells, and also 6-pounder cases. Some of the cases were not broken away from shells. They were sent up on the deck of the lighter that we were g.

. In your description, include the number of these things.

. I sent up two shells and one cartridge case. I also found lying nd there lots of accumulators, used for accumulating the air for torpedoes.

. You can read these plans, can you not?

. Yes, sir.

. There is the 10-inch magazine [indicating on plan]?

. I have something else I want to say before that. Lying right ss this 10-inch shell room there is an armor plate. The end of it is sticking up is thinner than the part that is down in the mud. reason I take this for an armor plate is that the plate has been right from the ship's side and turned completely over, so that the sheet of steel where the bolts pass through to bolt the oak back- nd the armor plate of the ship's side is right over, pointing to The thick part of this plate is down in the mud, and the thin of it is sticking up.

Just where is that plate?

Right across this part of the 10-inch shell room [pointing to the le of the 10-inch shell room], pointing from port to starboard.

It runs from aft forward?

Just in that angle, like that, across it [indicating]. I felt the that go through this oak backing and the thin sheet that screws the armor plate. I felt those. Then around here [indicating] were lots of those 6-inch powder tanks. In most of them the s are split. They are lying all over in the 10-inch shell room and nagazine—all around it.

Q. Have they all been sent up?

A. No, sir; they have not. There was a number of them sent up, though, and the excelsior—long strips of stuff, which was put in the bottom to help fill the tanks, is in them yet. There is a number of these tanks down there, that are in pieces as big as your hand, all torn to pieces. This 6-inch forward magazine, I don't think we have been in it. It is away forward. This one here we have been all through and all around, and that one [indicating].

By the JUDGE-ADVOCATE:

Q. Describe what you found the other times you went down?

A. The third time I was lowered down I was landed right about in the same place as the first, and I took the same direction toward the 10-inch magazine, to the starboard side of the ship. I can not make much headway there because the plates and everything seemed to be blown right down that way. I had to climb up and get in under them That is where the 10-inch powder tank came out of. I traveled well forward there as far as I could where this fixed ammunition was, and I found any number of them still there. There are 6-pounder shellls and cartridge cases. Yesterday when I went down—this was the fourth time—I went down where this crane was. I followed the skin of the ship right under. The skin of the ship looks in good condition right there until you walk out to where this 6-inch shell room starts. The plates are bent that way, from out inboard. They are all ragged edges. You can get in there. You can crawl up and go into a place and find the double bottom. I can feel the pieces of cement and things where you crawl over these ragged plates. That is about all I can explain now, I think.

Q. The first time you went down you struck a 10-inch tank, and you described it. Did you find any more 10-inch tanks at that time?

A. I found lots of 10-inch tanks; yes, sir.

Q. None of them had been blown open by a charge exploded inside of them, according to your opinion?

A. The seams in the majority of them are just split fore and aft. It seems as if the solder had been melted away from it, and it burst right in and flatted out. In that one part I was in you would find the lids of them.

Q. You say you never reached, according to your opinion, the forward 6-inch magazine and shell room?

A. No, sir.

Q. Suppose I were to tell you there are no 6-inch shell in that reserve magazine. How would you account for the 6-inch shell you found there?

A. They had been blown there from the forward one.

Q. Blown aft?

A. Yes, sir.

Q. You also said there were certain plates blown inboard. Show on the plan and describe fully where those plates are that you say were blown inboard.

A. Do you want me to take the bottom ones?

Q. Yes; the ones you said were blown inboard. I do not mean the bulkhead that was blown across the 10-inch shell room that you crawled over to get at the magazine. I mean the plates that you said were blown inboard. Describe exactly where they were.

A. They are about in the middle of the 6-inch reserve magazine and the 10-inch shell room, from about frame 26 forward. This plate runs right across. Those other plates are blown up. They are coiled right

n that shape [indicating], from out inward. One of them particu-
r that I noticed is coiled right over, just the same as if you took a
e of paper like that [indicating].
. Do you think that was the bulkhead or the inboard lining of the
ole bottom?
. No, sir; I do not.
. What do you think it is?
. It is the ship's bottom.
. The outside skin of the ship?
. Yes, sir.
. You place that about the middle of the 6-inch shell room?
. The middle of the 6-inch shell room.
. The reserve shell room?
. Yes, sir; and from there it comes in a circle, like that [indicating],
there is nothing of the outside of the ship there at all. I do not
w what is forward here, because I have not been there. There is
ing of the ship's skin there at all [indicating].
. Nothing forward of the reserve shell room?
. No, sir; as far as I went. About half of that reserve magazine
ere, but it is blown that way [indicating to starboard]. There is
the position the shells are sticking [indicating]. They are stand-
right on their bases, the points sticking up and pointing toward
board. I counted six of them standing right close together.
ut three out of that six had the slings on them, the hemp slings
l for sending them out of the magazine. In that part of it, there is
ing of the ship's bottom at all [pointing to the forward part of the
ch reserve magazine and the 10-inch shell room on the plan].
. Give a little more full description of the side and skin of the ship
ft that reserve magazine.
he COURT. May I suggest one thing? He mentioned that [indicat-
] as the crane. The crane stands about there [pointing to the middle
the side].
. I started down from the crane.
. When you walked forward to the magazine, the skin of the ship
s in good condition, you say?
. In good condition as you go down, in that shape [indicating].
. And the first sudden break is abreast of the reserve magazine?
. Yes, sir.
. You think abaft that, as far as the crane where you started your
rk, it is complete up to the waterways?
. I think it is all right from there aft, sir.
. From where aft?
. From the break in the 6-inch shell room to the crane.
. Here is the crane right here [indicating]. You went down at the
ne, did you not?
. Yes.

By the COURT:

. What do you mean, Smith, when you say you walked down? It
ld seem as though there was an inclined plane there?
. There is an incline from there down; yes, sir. It is all old
ckage. There is so much of it right in there that I couldn't tell
lly what it was. We will come across a ventilator or a piece of air
pressor or something else right aft there, where the boiler origi-
ly was. You can't make any head or tail of anything until you
e to this place here [indicating]. My work is confined right
and these magazines all the time.

By the JUDGE ADVOCATE:

Q. Have you been down on the starboard side?

A. No, sir.

Q. Anywhere on the starboard side?

A. No, sir; I have been a little over the center line of the ship.

Q. Coming from port?

A. Yes, sir.

Q. But you have not gone down on the starboard side?

A. No, sir.

Q. Do you know whether the bulkhead outboard of the 10-inch magazine is still standing?

A. I can't tell, because I haven't been over there.

Q. You did not reach that far?

A. No, sir.

Q. Will you describe fully the different articles you brought up?

A. The first thing I brought up was a 10-inch powder tank, full. The next thing I sent up was a 6-pounder shell that had been broken away from its case. I sent up a 6-pounder charge complete. I sent up one case that was broken away and one 6-inch powder tank that had been split open. That is all I sent up.

Q. What was inside that last 6-inch powder tank?

A. Excelsior packing.

Q. Was it full or was it empty?

A. Empty.

Q. Were both cylinder heads on?

A. Yes, sir; just the seam was split. That is all.

Q. Was the bag inside that had contained the powder?

A. No, sir.

Q. Then it might have been an empty tank stowed down there?

A. It might have been an empty tank.

Q. You can not account for the powder getting out and the bag getting out with both cylinder heads on, can you?

A. If they had been burst open, the powder would have melted as soon as it got wet and probably have floated out of it.

Q. Was the split in the side big enough to let the bag come out?

A. The whole length of the case; yes, sir.

By Captain SIGSBEE:

Q. Is there any great difficulty in getting over to the starboard side below in the magazine?

A. There is; yes, sir; because everything is blown from port to starboard.

Q. You think, then, it is not possible to get into the 10-inch magazine?

A. Yes, sir; I can get in there. Any one of us can get in there; by very hard work, though.

Q. Nobody has been in there yet?

A. No, sir; not right into it. They have been on the edge of it, but they have not been properly into it.

Q. Would it be very dangerous to go in there?

A. It is a pretty dangerous place; yes, sir, on account of you have to go up some frames and crawl down, and you are right underneath them.

Q. Could you tell anything about the location of the barbette, or turret, while you were down?

A. I didn't run across it at all, sir. I seen no part of it.

Q. Did you come to the conclusion that it was missing from its regular place on the forward side starboard, abreast of where you were?

A. Yes; it was missing from its proper place.

Q. Was it on the port side?

A. It was on the starboard side, forward. It was right plumb over the magazine. I didn't come across anything that would lead me to believe that I was around the turret at all.

By the COURT:

Q. Smith, you described that forward portion of the 6-inch reserve magazine as being entirely gone. The outside of the ship has entirely disappeared?

A. Yes, sir.

Q. There is a hole through the bottom of the ship at that point?

A. The side and everything is gone right away from it.

Q. Then, there must be a hole through the ship?

A. Yes, sir.

Q. How high up does that extend—that hole? Here is the side of the ship, you know, and you go down underneath. This is entirely gone, certain portion of it [indicating]?

A. Entirely gone; yes, sir.

Q. How high up on the side does it extend, or is that all gone, clear to the water?

A. Yes, sir; you can take me and lower me right from the diving bunch down into the mud, and I can walk.

Q. That might be, too, and if you were inside of the ship, there might be continuous metal outside of you?

A. No, sir.

Q. Suppose this were the magazine [indicating].

A. Yes, sir.

Q. You say that portion is all gone?

A. That portion is all gone; yes, sir.

Q. Why do you say this portion is all gone [indicating]?

A. That is the upper part.

Q. That is the upper part, I know, but when you are lowered down, do go right down into the mud?

A. I can walk off in this direction [indicating to port] and I come across nothing. I walk in here [indicating to starboard] and I come across the wreckage.

Q. That is, you say you can go right out there into the mud [indicating]?

A. Yes, sir; and there is nothing there at all until you walk aft.

Q. That is, the whole side has disappeared there?

A. The whole side has disappeared. It is completely gone right up there [indicating frame 26]. Then you can walk over. I don't know about this side [indicating].

Q. Do you mean all that part of the ship is gone [indicating everything over the 6-inch reserve magazine and 10-inch shell room]?

A. That part of the ship is gone, and everything up here is gone. Taking this for the port side of the ship, it seems that the midship bulkhead and everything on here is off in that direction [pointing to starboard].

Q. You have not been far enough to see what there is beyond? You do not know whether this hole extends clear forward or not?

A. No, sir; I don't know where that part goes. As far as I can give a good explanation, this was up to the fixed ammunition magazine [indicating]. Around in this part here [pointing to the 10-inch maga-

zine] we have not been much. Here is that armor plate [indicating on plan]. If you wish me to give a better explanation than I did before, probably I can do it now. This is the part [indicating the midship section] that is sticking up out of the mud [pointing to the lower part]. That has been torn off the ship altogether, and turned right over, and it is at that angle across the 10-inch room [showing an angle of 45 degrees to the keel].

Q. The greatest force of the explosion seems to have been forward here [indicating]?

A. Yes, sir; in the forward part of the 10-inch shell room, and the 6-inch spare magazine.

Q. Is forward of that?

A. It takes in part of the 6-inch shell room and part of the 10-inch shell room, too. Where these plates are ripped up, and all forward of that, is completely blown out.

By the JUDGE-ADVOCATE:

Q. Suppose the part that you say is blown away is a hole with a portion of the ship's side still over it. Could you walk athwartships out of the ship or into the ship without catching your tubes and life lines?

A. No, sir; I could not.

Q. Then if there were a part of the ship still standing above that hole——

A. I could feel my life lines hauling over it. Besides, I have a guide line right from the diving lines down, and made fast into the shell room—into the after part of it.

Q. Referring to that armor plate, you say it is thin edge up?

A. Thin edge up; yes, sir.

Q. It is at an angle of 45 degrees across the keel?

A. Yes, sir.

Q. The face which used to be outboard. Is that toward the starboard quarter of the ship or the port bow?

A. You take that [indicating] for an angle of 45°. It is pointing to the starboard quarter of the ship.

Q. And the place that has the nuts and bolts on it is facing which way?

A. To the port bow.

Q. I want to ask you one more question in regard to the port side of the ship, from the derrick forward to the part which was exploded most severely. What is the condition of the ship's side from the derrick forward to the reserve magazine?

A. The condition of the side seems to be pretty good.

Q. Give it a little more plainly than that. Is it complete up to the waterways, or is it gradually torn away down to this hole?

A. It is gradually torn away down to that; yes, sir.

Q. Commencing abreast of the derrick, it is gradually torn down until it reaches this hole of the large explosion?

A. Yes, sir.

Q. Is that it?

A. Yes, sir.

By Captain SIGSBEE:

Q. Did you see any indications in the direction of the metal below or otherwise to indicate that the 10-inch magazine had exploded?

A. No, sir; I can't see anything that indicates that the 10-inch magazine has exploded so far, because the plates all point to starboard.

Q. Did you notice any tendency of plates away from this 10-inch

magazine over toward the port side—of the plates bent from the magazine to port?

A. No, sir.

Q. They were all in the other direction?

A. They were all in the other direction—to starboard.

The testimony of the witness was then read over to him by the sten ographer, and by him pronounced correct.

The witness then withdrew, after being cautioned by the president not to converse about matters pertaining to the inquiry.

Seaman MARTIN REDEN, U. S. Navy, appeared as a witness before the court, and was sworn by the president.

Examined by the JUDGE-ADVOCATE:

Q. Please state your full name, rate, and to what ship you are attached.

A. Martin Reden; seaman; attached to the *Maine*.

Q. Have you been diving into the wreck of the *Maine* since her xplosion?

A. Yes, sir.

Q. How many times have you been down forward?

A. Twice.

Q. Twice forward?

A. Yes, sir.

Q. What was your profession before you entered the Navy?

A. Diving, sir.

Q. You are a professional diver?

A. Yes, sir.

Q. For how many years?

A. Seven or eight years; eight years, I think, sir.

Q. Have you done much wrecking diving?

A. Yes, sir.

Q. Where?

A. Key West, Oldtown, Mexico, Colon, and on the Mosquito Coast.

Q. Were you in good health when you went down to the wreck of e *Maine*?

A. Yes, sir.

Q. Do you think you can give testimony correctly as to what you and felt down there?

A. Yes, sir.

Q. How long were you down each time forward?

A. The first time, I think, I was down about three hours, sir.

Q. Tell the court all you saw down there during that time which give them information as to the condition of the *Maine*, and any coveries you made, and describe anything you may have brought up ing that dive.

A. The first time I went down, I went down about where the dynamo m is. There is nothing left whatever, only some plates and beams. an not tell if there has been a dynamo there, or anything else. erything is gone entirely. I felt away down in the mud as far as I ld go from outside. I walked from outside the ship into the ship, I could feel nothing else there. I only came across a plate or a m or a shell. That is all, sir. I went from aft the superstructure, went right down, and the mud goes aft I couldn't say how far. It ery dark there. I struck one bottom plate away down in the mud, the plate is bent in this way, and up that way [indicating].

Q. It is bent in and up?

A. It is bent in this way, right underneath the bulge of the plate. I went into the mud down to the plate, and the rivet is bent out. The plate is bent in this way.

By the COURT:

Q. You say it is bent "in this way." Which way do you mean; bent to starboard, or to port?

A. Bent right out. That is the ship's side [indicating]. The plate is bent this way, and the rivet comes out that way, and so the plate lies.

Q. Inboard or outboard?

A. That is outboard, sir. The plate goes this way [indicating]. The lower part of the plate is bent in, and the upper part is thrown out.

By the JUDGE-ADVOCATE:

Q. The middle of the plate is bent in, and the upper part, where it is fastened to another plate, is thrown outboard?

A. Yes, sir.

By the COURT:

Q. Let him tell where that is. Is that near the keel?

A. I can't tell how far it is from the keel, sir, because I can't see nothing. I can only feel, and put my face close up and see these plates. I don't know what part of the ship it is. I can't even see the paint, if it is green paint, or red paint, or white paint. As I walk along forward from aft on the port side, there is nothing left. When I get about 20 feet from that break, there is nothing left of the ship whatever, out for 30 feet I should think. Everything is gone underneath there. You can walk from the bottom right into the ship, only you go down in mud about 2 feet. There are lots of shells. Then when I get past them shells, I come to the armor plate. It is thrown into the ship. The armor lies about like that [indicating].

Q. Describe it. When you say "like that" we can not put it on paper.

A. It lies at an angle.

Q. At an angle with the keel?

A. Yes, sir; I should think at that place about midship; right inside, you know, there is nothing the matter with the plate whatever. I could find only two of them armor bolts or screws on the plate below. That is the only bolt you can find. The rest of them is so far down in the mud you can't find them. I should think that plate is about 7 or 8 inches thick. I didn't measure them, sir. Then forward of that plate I find nothing else but iron heaped up all over. I can't make nothing out of it, sir. They are bursted in and bursted out in all kinds of directions. There was lots of rope here [indicating], and one thing and another. I believe that came out of the holds way down below. There is no deck in there, and nothing whatever, only plates all torn up.

Q. In what part of the ship should you say that bent plate was?

A. I should think that plate is about 10 feet from the break of the superstructure.

Q. Forward or aft?

A. Forward.

Q. Then it was about abreast of the forward turret?

A. Somewhere around the forward turret; yes, sir.

Q. Only on the port side?

A. Only on the port side; yes, sir.

Q. This armor plate, you say, was thrown in at an angle to the keel. Is the edge sticking up?

A. The edge is sticking up.

Q. Is the thick edge or the thin edge sticking up?

A. The thick edge.

Q. How do you know?

A. If there is a top place, it must be smaller on top and thicker underneath, about as broad as that [indicating]. I could feel right down.

Q. How many inches should you say it was on top—the top edge?

A. Seven or eight.

Q. You do not know whether it was thicker at the bottom part or not?

A. No, sir.

Q. You only felt the top part?

A. Yes, sir.

Q. If it was at an angle to the keel, one side must have been facing one of the quarters of the ship?

A. Yes, sir.

Q. One was facing forward and the other was facing aft?

A. Yes, sir.

Q. Which was facing aft, the original outboard portion or the original inboard portion?

A. The inboard portion is facing out, sir.

Q. The inboard portion which has the nuts on it is facing forward?

A. Facing out and forward; yes, sir.

Q. And the smooth side, which used to be against the water, is facing how?

A. Inside, aft and starboard.

Q. Did you bring anything up this time when you went down diving?

A. Only about three tanks of powder—powder tanks.

Q. Describe what they were, and what condition they were in.

A. They was all torn up, mashed together in that way [indicating]. Another one was burst right out, torn right in pieces.

Q. Were they 10 or 6 inch tanks?

A. Ten-inch.

Q. You used to work at the 10-inch guns, I believe?

A. Yes, sir.

Q. Your second descent—describe that, where you went down and what you did.

A. I mixed it about all up, the second descent and the first one.

Q. You have described both descents, have you?

A. Yes, sir; both of them.

Q. Did you approach the starboard side of the ship—the forward turret?

A. No, sir.

Q. How far toward the starboard side of the ship did you go when you were down?

A. I must have been, I should judge, away over—right where the turret ought to be.

Q. You do not think there was any ship's side left there?

A. No, sir.

Q. But you are not certain you went beyond?

A. No, sir.

Q. Did you find anything of the turret at all?

A. Nothing at all—nothing whatever.

Q. Your explorations were more on the port side than on the starboard side, though?

A. Yes, sir.

Q. Did you go into what you thought to be the 10-inch magazine?

A. I felt holes there. I couldn't say whether it was the magazine or not.

Q. It was full of holes there?

A. Yes, sir; I don't know what it was. I found a heap of shells there, and I found them all over there—them shells.

Q. You found more shells than powder?

A. Yes, sir.

Q. You probably got as far as the 10-inch shell room, but not to starboard of it. The forward 10-inch magazine is to starboard of the shell room?

A. Yes, sir.

Q. And you went in from the port side?

A. Yes, sir.

Q. So, probably, you did not go farther than the shell room. Do you think that is so?

A. No; I walked farther than that. I passed them shell.

Q. Did you strike the tanks?

A. No, sir.

Q. Where did you find the tanks you brought up?

A. I found them tanks not very far from them 10-inch shells.

Q. On top of them?

A. No, sir; on one side.

Q. Which side?

A. On the starboard side of them.

Q. That must have been the magazine?

A. You can't tell nothing. Everything is only a piece of iron. There is nothing left at all.

Q. Do you think there is anything of the forward part of the ship left, forward of this 10-inch shell room?

A. There is some plates left there, all bent out. You can't make out what it is. I was away up amongst those.

Q. How far forward do you think you got in you travels?

A. I went as far as I could. I couldn't say exactly.

Q. Did you reach this fixed-ammunition room?

A. No, sir.

Q. You did not strike any 6-pounders or 1-pounders?

A. No, sir.

Q. Did you find any paymasters' stores of any kind?

A. Yes, sir; I found them all over the ship—canned stuff.

Q. What condition were the cans in?

A. I picked up a few cans that were all right. Some was busted.

Q. What was the character of the break of the vegetable cans?

A. They were torn up. Some of them was crushed together and some of them torn out—all kinds of shapes.

Q. Split open along the seams?

A. Some was split and some was crushed together.

By Captain SIGSBEE:

Q. Was the metal of the ship, in a general way, bent from port to starboard or from starboard to port, below the water?

A. The plates of the ship, you mean?

Q. Yes.

A. The plates was bent in from port to starboard.

Q. Inboard, you mean?

A. Inboard; yes, sir.

Q. From port to starboard?

A. Yes, sir.

Q. Was there anything in the condition of the metal below to indicate that the 10-inch magazine had exploded?

A. Why, no.

Q. That is, did you see any tendency of the metal from starboard to port to indicate that the 10-inch magazine had exploded?

A. I don't understand you.

Q. Was the bending of the metal below—the direction in which the metal was bent—such as to indicate that the starboard magazine had exploded? That is to say, did you see the metal bent from starboard to port?

A. Yes, sir.

Q. Let me ask that question over again. I assume that if the starboard magazine had exploded, it would have shown a certain amount of the metal bent from starboard over to port. Did you see metal bent that way in general—anything to indicate it?

A. There was metal all around there. I couldn't say, sir.

By the COURT:

Q. Then you did not notice any general tendency of the metal. For instance, we will assume that it is fastened at the bottom of the ship, unless you go into the space where the bottom is entirely gone; but outside of that, where the ship is less completely destroyed, there must be bulkheads that stand up around there?

A. There are some.

Q. Suppose it is fore and aft. Is it bent that way, or is it bent that way [indicating]?

A. They are bent in all directions. Them pieces that are left inside the ship are bent in all shapes, sir.

By the JUDGE-ADVOCATE:

Q. Where were you at the time of the explosion of the *Maine*?

A. In the after turret, sir.

Q. Were you asleep?

A. Yes, sir.

Q. What was the first thing you knew?

A. The first thing I knew, I didn't see nothing else but flames, and everything come in the turret, and the roar of the water.

Q. You got out?

A. Yes, sir; I got out.

Q. How?

A. I am not certain whether I come through the hatch or the ventilator; I don't know.

By Captain SIGSBEE:

Q. Were you well acquainted with the compartments of the *Maine* forward?

A. Yes, sir.

By the JUDGE-ADVOCATE:

Q. Did you say you are well acquainted with them?

A. Yes; I know the compartments.

Q. When you went down did you recognize anything that you can describe?

A. I couldn't recognize nothing, sir. I know the compartments well, and if I had seen anything I could have recognized them; but there was nothing left to recognize, sir.

The testimony of the witness was then read over to him by the stenographer and by him pronounced correct.

The witness then withdrew, after being cautioned by the president not to converse about matters pertaining to the inquiry.

Gunner's Mate W. H. F. SCHLUTER, U. S. Navy, appeared as a witness before the court and was sworn by the president.

Examined by the JUDGE-ADVOCATE:

Q. State your full name, rate, and the ship to which you are attached.

A. W. H. F. Schluter, gunner's mate, second class, serving aboard the U. S. S. *New York*, lying off Key West, Fla.

Q. Have you been engaged in diving in Havana Harbor since the explosion of the *Maine*?

A. Yes, sir; I was down once for one hour.

Q. What part of the ship did you go down in?

A. I was lowered down from the side a little forward of the turret, which was broke off. I was let down about 6 feet or 8 feet, I can't exactly say which. I landed on some ragged edges, bent inboard from the port side over to the starboard side. I crawled then a little ways, and I dropped down about 3 or 4 feet farther, and I landed on something solid. It was something like little lumps laying along. Then I crawled along and landed on some coal. The coal was in good condition, for I picked it up and looked at it. Then I crawled along over ——

Q. Which way were you going?

A. Forward, on the port side. Then I ran against something that was going up. It looked like a partition. I crawled up on the top of that, and it was one of them beams going down that was broke off. I crawled around that, and it was kind of bulged under like, inboard. Then I stood there a little while, and I come back again and went on the inside of this plate. I went down a little ways, and I couldn't touch no bottom, so I crawled back again. That is as far as I went.

Q. You really recognized nothing?

A. No, sir.

Q. You brought up nothing?

A. I went after one of them haversacks. I found that right near the coal.

Q. Were you feeling well when you went down under the water?

A. Yes, sir; I felt well. I am sure it was coal, because I picked it up and looked at it.

Q. Were you yourself feeling well?

A. Yes, sir.

Q. Were you all right?

A. Yes, sir.

Q. Why did you not go down again?

A. It was dinner time, and after that we were told to come over to the court.

Q. You had just commenced?

A. Yes, sir.

Q. On what day did you go down—yesterday?

A. It was yesterday morning; yes, sir. Most of the diving I have done in Havana has been aft except this one time I have just described.

The testimony of the witness was then read over to him by the stenographer, and by him pronounced correct.

The witness then withdrew, after being cautioned by the president not to converse about matters pertaining to the inquiry.

Gunner's Mate CARL RUNDQUIST, U. S. Navy, appeared as a witness before the court and was sworn by the president.

Examined by the JUDGE-ADVOCATE:

Q. Please state your full name, rate, and to what ship you are attached.

A. My name is Carl Rundquist; gunner's mate, first class; on board U. S. S. *New York*.

Q. Have you been diving in the harbor of Havana since the *Maine* exploded?

A. Yes, sir.

Q. Have you been down forward?

A. I have been down forward.

Q. How often?

A. I have been down once, sir.

Q. How long did you remain down?

A. I should judge a little over two hours.

Q. Have you been down aft?

A. No, sir.

Q. Are you a good diver?

A. I have been down before, sir.

Q. Can you see well under water?

A. I could see not very well, but when I put my face close to an object I had a pretty good view of it.

Q. Did you feel well whilst you were under water?

A. Yes, sir; I never felt bad.

Q. Please describe to the court just what you saw as to what was left of the *Maine*, and any objects that you recognized; their condition, or anything you may have brought up. Give us the whole history of your descent.

A. When I left the lighter I got, as far as I could judge, down in the after part of the 10-inch magazine, because when I came down I came down among plates, etc. I walked 2 or 3 feet more, and I came across a lot of empty 10-inch powder tanks. Some of the seams were open, and others looked like they had been in a pressure from both ends. I went one of them up, and there was lots of them down there.

Q. Just tell us how many.

A. I couldn't say how many, because I had to feel for it, but there were dozens of them—pieces of them blown in all directions. I left then, and went aft from where I was standing. I should judge that would be aft. I came across lots of cans that looked like it was preserved stuff. It looked to be the paymaster's stores or something, and close to there I found a piece of armor plate. On one side of it was the backing, and that plate looked to be turned over, because the end I got hold of was between 6 and 7 inches in thickness. I measured with my fingers. I put the end of my thumb on one edge and my middle finger on the other. It looked to be thicker downward. I went down as far as I could, down in the mud, and the edge of it was down in the mud. I couldn't find out the exact thickness there. From there I went outside. I went to the left. That would be to the port side of the ship, and I followed the bottom there for about 8 or 10 feet. I know I was on the bottom of the ship, because I could see the green paint on it, and as far as I could judge——

Q. Was this green paint inside the ship or outside the ship?

A. This was on the outside of the ship, because I put my face close to it, and it looked to be the bottom of the ship, because that must

have been below the armor plates, where the armor belts go, because it was only the exact thickness of the skin of the ship—the thickness of a plate. One side was pretty rough. It must have been inside the double bottom or something. It was a rough paint, and the outside was slippery and green. In some places it was all ragged. The pieces were all torn ragged and it looked to be inward. That is about all I saw down there, sir.

Q. Where were you lowered down; on the starboard side of the ship?

A. No, sir; I was lowered down about midships, a little to the port side. We had a lighter lying right across the ship.

Q. You think you landed in the 10-inch magazine?

A. I landed close to it, because there was lots of empty powder tanks.

Q. Of all those tanks that were there, were any of them in good condition?

A. None that I came across. They were all bent over. I came across two or three of them that the seams were opened.

Q. Were any of them full?

A. No, sir; none of them I came across.

Q. Do you think they had been exploded by a charge inside?

A. It didn't look that way, sir, from where I was. It looked like there had been a pressure from the outside that opened them up.

Q. What was the condition of the cans of provisions you found?

A. They were in good condition.

Q. Describe a little more plainly this hole that you found. You say the ragged edges were pointing inboard. How large were these ragged edges; how long?

A. Of the plates?

Q. Yes.

A. This plate I found. It looked to be the whole plate or the biggest part of a plate, and it looked like it had been torn off from another plate, because there was only one side of it I found was raggy, and I found a plate standing in that direction [indicating].

Q. Describe it.

A. It was pointing to port, aft, and the raggy end, I found, was the upper end. I landed on it, and I slipped down from it once and crawled up on it again.

Q. Was that a plate still made fast to the ship's bottom?

A. No, sir; that was a plate that was loose. It looked to be turned completely over.

Q. That is the armor plate?

A. The armor plate.

Q. I am not speaking of the armor plate. You said when you went further along you found a place where the ship's side had a hole in it, you saw the green paint; and you said the edges were ragged and bent in. I want you to describe the edges a little better.

A. That looked to be the bottom of the ship, or a piece solid, fastened to the plate.

Q. Was it a round hole, or was it completely turned up to the water's edge?

A. Completely turned up to the water's edge.

Q. There was nothing above this place?

A. Nothing above it whatever. It looked to be no plates there, or anything there.

Q. The ragged edges were directly bent inboard?

A. Bent inboard.

Q. You are sure they were not bent out?

A. Yes, sir; I am sure.

Q. And the green paint you saw was on the part bent inboard?

A. The green paint was on the part bent inboard, that was coming on top like.

Q. About this piece of armor plate you speak of, the part that had the bolts on it. Which way was that facing in regard to the ship?

A. That was facing outboard.

Q. Which way—forward or aft?

A. Facing aft.

Q. Explain fully how this piece of armor plate was lying, and the direction of the keel, and how the original outboard side was facing, and also how the side with nuts was facing?

A. That plate was fast in the mud so I couldn't get hold of the lower edge of it. The top edge, I should say, was about 7 inches in thickness, and that side of the plate where the bolts and backing was on, was facing to port.

By the COURT:

Q. Did it stand that way, or did it stand that way [indicating]?

A. It stood the way it is on that drawing, sir, so far as I could make it out down there.

Q. How does that plate face now?

A. The part of the plate that is supposed to be inboard is facing outboard.

Q. That is, it was turned clean over?

A. Turned clean over, sir.

Q. I would like to ask, for my own information, whether this armor plate was inside of the ship?

A. It was on the inside of the ship; yes, sir. It was about half way from the midship, and out to the portside of the ship, half way inboard.

Q. Yet you say that it was not resting on anything but the mud?

A. It was resting on the mud. There was a big piece of the ship there that was entirely gone. The bottom of the ship was all blown up. There was nothing there.

Q. You speak of starting from some point near these copper tanks or powder tanks and walking toward the port side, and you say you were walking on the bottom; that you knew it to be the bottom because it was painted green?

A. I didn't mean to say that I walked on the ship's bottom. I was walking in the mud, or rather crawling in the mud, because in some places I had to haul myself along. I was going alongside the ship's bottom, on the piece that was left of the ship's bottom. I know it was the ship's bottom because I could see the paint was green and slippery.

Q. Was this piece detached from the ship?

A. That looked to be just on the edges of the ship.

Q. You said you walked some distance, you thought about 10 feet?

A. About 10 feet.

Q. You could not have been walking on the bottom of the ship?

A. No, sir; not on the bottom of the ship. On the bottom of the harbor, in the mud.

Q. You said you were walking on the bottom of the ship, and you knew it to be so because it was painted green?

A. I mean to say that I was walking on the outside of the ship, close to the ship's bottom.

Q. You were walking in the hole where the ship's bottom ought to have been?

A. No, sir; on the outside of the ship, sir.

Q. How did you come to go outside of the ship?

A. There was lots of wreckage out there. I slipped on from one piece to another, and I happened to get on it more by accident than anything else, because I slipped on, and I landed on the mud.

Q. How do you know you were outside the ship when you landed in the mud?

A. I couldn't see anything around me. I was crawling around for a couple of feet on each side, and couldn't see anything. It must have been on the outside, or else it was an empty space, where there was nothing, or else the ship must be completely blown away.

Q. That is the ship's section there [indicating]. You understand that?

A. Yes, sir; I understand that.

Q. Were you out here, or were you here [pointing to outboard and then inboard], or where were you?

A. I judge I was somewhere around here [pointing to the longitudinal shown on the midship section], by the curve of the ship.

Q. I thought you said that was all blown away there?

A. This was on the forward part of it; but I took a walk aft 8 or 10 feet, somewhere around there—I couldn't say exactly how far—after I left this hole, and found this plate; and going from one piece of the wreckage to another I came down in the mud, and I was rolling along in the mud when I happened to strike my hand up against something. I felt, and I felt this green slippery piece of steel or something. I put my face close to the plate and I could see it was this green paint. It must have been the outside of the ship. I followed that along, I could not say how far—some 8 or 10 feet—and I come to this raggy edge of it, and there at the edge it was standing in this direction, like [indicating].

Q. Describe the direction. "This direction" does not describe it on paper.

A. It looked to be inboard, bent over—more rolled up than anything else, on the edge of it.

Q. Was that all around the edge?

A. It was all around the edge. It was all torn.

Q. I understand it was torn if there was a hole there, but you must be very careful when you say that that edge of it was turned inboard.

A. It looked to me it was laying inboard.

Q. How much of it did you examine?

A. I examined parts of the edges of it. This piece I followed along in the bottom, that looked to be a good solid piece of the ship. That must have been close to the hole where the explosion took place, because that seemed to be a good solid piece.

Q. How did you think this hole was made in the bottom of the ship?

A. My opinion is, I believe that she was blown up from the outside and in, because there was no explosion from the inside could make a hole like that, from the way them plates stood around in different directions.

Q. Do you think there was no explosion from the inside that could make that hole?

A. There may have been an explosion from the inside afterwards, but in the first place there was an explosion from the outside.

Q. Why do you think so?

A. Because I would never have found them plates in the way I did.

is piece of armor plate and the edges of that hole, I would never ve found it that way.

Q. What strikes me is this—that you did not examine enough of that ge to form an opinion.

A. I didn't examine all of it, no; but I examined some parts of it, l that part that I examined looked like it had been bent inboard.

The testimony of the witness was then read over to him by the ste- rapher, and by him pronounced correct.

The witness then withdrew, after being cautioned by the president to converse about matters pertaining to the inquiry.

The JUDGE-ADVOCATE. I notify the court that Ensign Powelson has ttle additional testimony to give this afternoon, and that besides Gunner Morgan and Gunner's Mate Olsen have to read over and ect their testimony. I have no other evidence to offer at present.

The court then (at 12.50 o'clock p. m.) took a recess until 2 o'clock. The court assembled at the expiration of the recess.

Present: All the members of the court, the judge-advocate, the ste- apher, and Captain Sigsbee.

Gunner MORGAN here appeared before the court and was handed so of the record as contained his testimony. He was directed to draw, read it over, return to the court and state whether it is cor- as recorded.

The JUDGE-ADVOCATE. If the court please, I ask permission to intro- Mr. Henry Drain, clerk at the United States consulate in Havana, have him sworn, to act as interpreter.

Mr. HENRY DRAIN, by permission of the court, was duly sworn by the advocate, in accordance with the United States Navy regulations, ook his seat as interpreter of the court.

The witness then appeared before the court, whose name and address ppressed by agreement with the witness that his identity should e revealed, and was sworn by the president, through the inter- r.

Examined by JUDGE-ADVOCATE (through the interpreter):

I have heard that on Tuesday morning you overheard a certain rsation in a ferryboat which referred to the possible sinking of *Maine*. Will you please state to the court all you can in regard to natter?

The INTERPRETER. At about half-past 7 on the morning of the 15th, s crossing from Havana to Reglas. He was sitting on a front n the bow of the vessel—the ferryboat. There were, about 4 feet t, three officers, two of the army and one of the navy, of Spain, esides a citizen, a stout man, about fifty years of age. They were rsing about the *Maine*. He says one of the army officers said that circulio militario, the military club here on the Prado, "That is arranged." The citizen inquired: "Will not making explosions bay run great risk to the city of Havana?" The citizen inquired rom the Spanish officer who had made the first remark. He says he officer replied "no;" that it was arranged so that it would sim- plode, open the vessel, and she would sink immediately. Then the man, with an exclamation apparently of joy, said: "I will take of beer on that occasion." At that moment a cartman came

forward and one of the men touched the other and stopped the conversation, and then he could not hear any more. He said they kept on speaking, but he did not hear any more.

Q. What was the first remark made by the army officer?

The INTERPRETER. That he had heard in the circulio militario that the plans were all arranged, and they were going to blow her up anyhow; that it was a shame to Spain that she should be here in the bay. The lieutenant said: "Then if you blow her up, there would be another one come," and the superior officer said: "They would take care not to send another."

Q. Did the second army officer make any other remark?

The INTERPRETER. He says yes; they were all speaking, but they were speaking in a low voice; he could not catch all they said. He was standing up, close to the wall, so that they would not notice he was listening to them.

Q. Could you distinguish what the navy officer said?

The INTERPRETER. No; he could not.

Q. Are you personally acquainted with any one of these four persons?

The INTERPRETER. He says that he does not know any of them. He could not recognize any of the three officers, but that very probably he could recognize the citizen.

Q. How often do you cross in the ferry from Havana to Reglas?

The INTERPRETER. He says in those days he crossed twice, in the morning and in the afternoon, but now he only crosses in the afternoon, there and back again; that he went at half past 7 in the morning, and would return at 10 to breakfast; that he would go at 4 or 5 o'clock in the afternoon back to Reglas again; and that about 9 or half past 9 or 10 o'clock in the evening he would return to Havana.

Q. Did you ever meet any of these four men before on the ferryboat?

The INTERPRETER. He can not say, because he had never noticed them. He went every day, and he did not notice them.

Q. What was the character of the uniform of the army officers?

The INTERPRETER. One was a lieutenant, and the other one had stars down below the stripes. He had two stripes, which would indicate that he was from a major upward. He also had a belt—that would indicate that he is of the general's staff.

Q. What was the color of the uniform?

The INTERPRETER. All of that little stripe that they wear here.

Q. Blue linen?

The INTERPRETER. Yes; blue linen. The marine officer was dressed in dark blue, but he did not notice the insignias that he had on at all.

Q. Which one of the army officers made the remark you spoke about—the staff officer or the lieutenant?

The INTERPRETER. The staff officer. He spoke with the citizen.

Q. What was that you said about a diamond?

The INTERPRETER. The citizen had on a big diamond ring.

Q. Please describe the citizen.

The INTERPRETER. He was a large, stout man, about 50 years of age. He had a mustache only, somewhat gray. He used one of these black derby hats, and dark clothes.

Q. Can you describe the staff officer a little more fully, his age and appearance?

The INTERPRETER. Somewhere around about the same age, about 50 years of age. He did not notice very well, but he thinks he used chin whiskers.

Q. And the lieutenant?

The INTERPRETER. He says he must be about 40 or 42 years of age, l used a mustache.

Q. And the naval officer?

The INTERPRETER. He was over 40.

Q. Did they wear swords?

The INTERPRETER. None of them used swords.

Q. Would you be able to recognize these persons again?

The INTERPRETER. He sticks to the same thing, that the officers he ld not recognize, because he did not pay much attention, that the ng went out of his head afterwards; but he thinks he would recog- e the citizen. He says there are a great many officers crossing con- nally.

Q. Are you quite positive of the conversation you have repeated?

The INTERPRETER. Yes, sir.

Q. What object did you have in informing the consul-general of this versation?

The INTERPRETER. The substance of what he says is that he was ting with a friend of his in the Café San Nicholas after this occur- ce, and he told him all the conversation he had heard. The friend l him: "Why don't you go and say something about this to the con- te?" He says he was afraid to say anything about it, that he would himself into trouble. The friend said: "I will go and inquire from of these newspapers—the Journal or the World—and see if there ny danger in it." The friend went and inquired, and said there d be no danger whatever, and he then determined to tell the consul.

Did you go to the consul at all?

e INTERPRETER. No, sir.

What was the name of the friend you spoke to?

e INTERPRETER. He says he will find out the name; that he is one ese friends whom you know without knowing who they are. He find out the name. He sees him every day.

Is he a Spaniard?

e INTERPRETER. He is a Cuban.

Are you a married man?

e INTERPRETER. No, sir; single.

Have you any family here?

e INTERPRETER. He says he and his father are here, and he has living eighteen years with a woman, but he is not married to her.

How many people were on board the ferryboat at the time of this ersation? State about how many; whether it was crowded or not ded is the main issue.

e INTERPRETER. Very few, and nearly all were in the after part s somewhat cool, and there were very few people.

ere being no further questions to ask this witness, his testimony read over to him by the stenographer through the interpreter, and m pronounced correct.

e witness then withdrew, after being cautioned by the president, gh the interpreter, not to converse about matters pertaining to quiry, and after saying that it was not to his interest to converse anybody about it.

nner's Mate OLSEN here appeared before the court.

e JUDGE-ADVOCATE. Olsen, I now hand you so much of the l of the court as contains the testimony given by you. Please raw, read it over, and then return to the court and state whether orrect as recorded, or whether you desire to make any corrections.

e witness then withdrew.

Gunner MORGAN here appeared before the court.

The JUDGE-ADVOCATE. Gunner Morgan, have you read over the testimony given by you before this court on yesterday?

Gunner MORGAN. Yes, sir.

The JUDGE-ADVOCATE. Is it correct as recorded in the smooth record?

Gunner MORGAN. It is.

The witness then withdrew, after being cautioned by the president not to converse about matters pertaining to the inquiry.

Ensign POWLESON, U. S. Navy, a witness heretofore examined, was recalled to the witness stand, and, after being cautioned by the president that the oath previously taken by him was still binding, testified as follows:

Examined by the JUDGE-ADVOCATE:

Q. Have you any further information to give to the court in regard to the wreck of the *Maine*?

A. Yes, sir.

Q. Please state what you have.

A. May I refer to some drawings that I have brought with me?

Q. Certainly.

A. These are the blue prints of the drainage system of the *Maine*, taken from the wreck. I have succeeded in identifying the part of the protective deck of which I submitted a sketch yesterday or the day before. This is a plan of the protective deck of the *Maine*. The frame spaces aft of frame 18 are 4 feet; forward of frame 18 they are 3 feet 6 inches; forward of frame 12 they are 3 feet. This is drawn to the scale of 1 inch equals 1 foot. These frame spaces in between frames 18 and 12 are 3½ feet; those aft of frame 18, as I said, are 4 feet. In the sketch which I have submitted the distance between beams I have made 3 feet 7 inches, which was the measurement that I took from the wreck. That was probably an error of an inch. That, then, places this part of the protective deck somewhere between frame 18 and frame 12. At frame 16 is a water-tight bulkhead and at frame 18 is a water-tight bulkhead. The surface of this plate submitted shows no evidence of bulkhead angle iron on the upper surface. This, then, eliminates the space between frames 18 and 16. Therefore the plate is somewhere between 16 and 13.

As you will see, the outward plate of the protective deck is cut off a little on one point. The width of the plates of the protective deck is 4 feet. The width of the ship at frame 13 is 12 feet 9 nine inches. Then, if the edge of the protective-deck plating at the midship line were exactly at the midship line, this would take three full plates with 9 inches left over. Between the upper plating of the two plates of the protective deck and the side is an angle iron, running along the side with 4-inch flange. That would leave, then, a space of about 5 inches to be filled in by a wedge-shaped piece. It is not probable that the edge of the upper plating of the protective deck is exactly at the midship line. It is probable that it is to one side or the other, to allow for the lapping of the upper plating on the lower plating. This frame 13 corresponds more closely with the drawing measurements taken from the wreck than would frame 14. Since these two frames are confined to frames 15, 14, and 13, that narrows the deck down to the parts between 15 and 12 along the port side compartment A36. This plate, which I have shown in the sketch I submitted yesterday, shows the

ivets for the cofferdam bulkhead. My conclusion is that the sketch hich I have shown comes from compartment A36, between frames 15 nd 12.

Q. What is there in the ship above compartment A36 between frames ? and 15?

A. A36 is the cellulose compartment, and just inside of that is A34. his is part of A34. This plate is taken from both A36 and A34.

Q. Then that would be forward of the forward 6-inch magazine?

A. Yes, sir. I have also succeeded in identifying a part of the bot- m plating, which is now about 4 feet above water, 12 feet abaft the ece of protective deck which I have just referred to.

Q. That is over the magazine, is it?

A. No, sir; I will explain where that plate comes from and my reasons r believing so. This plate shows the split in the reverse, and the me angle irons, where the floor plating first begins at the ship's side. also shows a water-tight longitudinal with the cement along the tom and a part of the inner bottom plating. The distance between frame that is highest out of water and the frame next below it is et 6 inches. The distance between this frame and the one next w that is 4 feet. There is only one place in the ship at which such ne spacing occurs. That is at bulkhead 18, the space between 18 19 being 4 feet and between 18 and 17 being 3 feet 6 inches. Be- en frames 18 and 17 I found a sluice valve about 3 inches square. sluice valve is on the under side of the water-tight longitudinal. longitudinal at this point was about 17½ inches in depth. From drawings of the inner bottom of the *Maine*, I locate this sluice valve he second longitudinal, near the water-tight bulkhead at frame 18. drawing which I have does not show a sluice valve at that point, does it show that the second longitudinal is water-tight.

here has evidently been some change since these plans, and the nd longitudinal has been made water-tight, and a sluice valve has put in the after part of it next to the bulkhead at frame 18, to n from compartment A41. Frame 17 shows about 5 feet above water-tight longitudinal to which I have referred at the point where rame and reverse angle irons divide and the floor plates are first ted. That can be seen better on the sectional plan at frame 18. is the sectional plan at frame 18. Here is the second longitudinal hich I fixed the sluice valve to which I have referred. The height e second longitudinal at this point is 18 inches, which corresponds closely with the measurement taken from the wreck. In this piece ttom plating, to which the longitudinal was attached, I found an ing in the ship's side, being the Kingston valve or a similar valve. inner bottom drawings show such a valve to exist in that compart- for the purpose of flushing the main drains and secondary drains is point. The plates of the inner bottom are plainly visible for a nce of 8 feet from the longitudinal to which I have referred and t two or three feet under water. Forward of frame 17 the outside ng has been again split, forming a V, with the outboard wing of r plating than the starboard or inboard wing.

e angle of the V is about horizontal, and the ridge stands nearly and aft. The plating just abaft this V seems to have been broken s and pushed up to form a V, of which frame 17 is the apex. This s that the bottom plating, about 11 feet from the keel, has been to a point about 4 feet out of water now. This bottom to which rred is almost directly under the forward port edge of the for- 6-inch magazine.

Q. The forward edge of it comes to frame 18?
A. The forward edge of it stops at frame 18.

By the JUDGE-ADVOCATE:

Q. Where is that sluice valve situated—also under the forward part of the 6-inch magazine?
A. Yes, sir; at frame 18.
Q. That forward 6-inch magazine is between what frames?
A. Between frames 18 and 21. There are several other sluice valves in the longitudinals of the double bottoms, but with the exception of sluice valve No. 4, are in frame spaces of 4 feet. All other sluice valves in the longitudinals, according to the drawings, are in frame spaces of 4 feet, showing that this sluice valve is forward of frame 18. The only other water-tight bulkhead forward of frame 18 is at frame 12, and in the space forward of frame 12 there are no water-tight longitudinals.
Q. Then the appearance of that V-shape that you saw, and the appearance of the plate, now makes you feel convinced that the bottom of the ship was thrown up?
A. Yes, sir.
Q. And not out?
A. Not out.
Q. This is under the forward part of the forward 6-inch magazine?
A. Yes, sir.
Q. And you have seen no other bottom plating as yet to confirm this?
A. This bottom plating is very large in extent. It extends down under the water on both sides from the angle of the V as far as I could touch with an oar or boat hook. I took one of the divers over this afternoon and explained to him what I wanted him to do. I wanted him to go down and follow the frames along as far as possible, and follow the longitudinals and keep track of them, so that he could tell me at what point the bottom plate ended, and the condition of the break at that point.
Q. Who was the diver?
A. The diver's name is Olsen.
Q. Can you state the amount of ship's bottom that is now visible and between what frames?
A. I can see now frames 16, 17, 18, 19. I can see water-tight longitudinal No. 2, port. I can feel with the boat hook longitudinal No. 1. I can see plating running down under the water for about 15 feet aft of frame 17 and 20 feet forward of frame 17.

By the COURT:

Q. All on the port side?
A. Yes, sir.
Q. How far from the center line of the ship do you place the upper plate of the bottom plates now showing above the water, which is bent into this V form?
A. The upper plate is between 11 and 15 feet from the center line of the ship.
Q. You mean that is the highest point?
A. The highest point; the upper plate.
Q. Taking the section, at what depth would that be?
A. Six and a quarter feet, sir, above the plane of the keel.
Q. How much has that been raised; that is, according to the draft of the ship before the explosion?
A. The forecastle superstructure would be about at the water now—

out where the water line is now—so that it would have been lifted out 38 or 39 feet from its original position when the ship was floating.
Q. Was there any paint on the outside of that bottom plating?
A. The outside of the bottom plating is covered with greenish paint. side, between frames 17 and 18, it is cemented for a distance of 18 :hes above the longitudinal. It is calk paint beyond that. Abaft ıme 18 it is cemented as far as the plate extends to the points broken ', about 4 feet from the longitudinal. I also found between frames 18 d 19 a piece of piping, with two right-angle turns, such as is repre- ıted on the drawing of the inner bottom at compartment A10. mpartment A4 contained piping of this description. This piping ›wed the caps at right angles, the same as shown here, and I found s piece of piping lying in an angle of one of the frames and the gitudinal.
Q. Mr. Powelson, you have not come across any portion except that ›tective deck of either of the decks above that point, have you?
A. Yes, sir; there is a part of the berth deck which was thrown some feet forward of the part of the protective deck of which I have made ketch; but as to just where that was on the berth deck I am unable letermine. It has the planking and red shellac of the main deck.
Q. Is there any of the main deck visible?
A. No, sir; none of the main deck is visible forward.
Q. None of the main deck is visible forward of the end of the midship erstructure?
A. No, sir.
Q. Forward of frame 30?
A. No, sir.
Q. Starting from the point at which this bottom has been lifted, frame nd running aft to the points where the divers have testified that bottom plating is cut through to the after side of that opening, how y frames are there? What is the distance?
A. The frame which I said formed the apex of this V?
A. Yes.
Q. I do not know, of course, what they testified to. I only know they tell me. The diver to-day told me that he had found a hole starboard of that plate I was speaking of, down below—a hole gh the ship's side; and that is what I sent him down to investi- still further. He bent a line on some plating around this hole. I myself this plating on the port side was torn from that on the oard. The diver told me this morning that he had found the nnition from the 6-pounder magazine pushed over to the starboard
Q. Was that Olsen?
A. Yes, sir.
e judge-advocate requested that the testimony be not read over to itness by the stenographer, but that he be directed to report to-mor- morning at 10 o'clock, when he will be furnished with so much of ecord as contains his testimony, and asked to withdraw for the deration of the same, upon the completion of which he will be called before the court and be given an opportunity to amend his mony as recorded, or pronounce it correct.
e request was granted, and the witness was instructed accordingly; upon he withdrew, after being cautioned by the president not to s matters pertaining to the trial.

Gunner s Mate OLSEN appeared before the court.

The JUDGE-ADVOCATE. Olsen, do you wish to make any corrections in your testimony?

Gunner's Mate OLSEN. I wish to make the following corrections:

On page 140, line 14, after the word "right" strike out "over in that direction [indicating]" and insert "over to starboard."

On page 141, line 5, after the words, "paper inboard," strike out "from stem to stern." In line 7, after "one plate complete," strike out "the top of the plate standing up." In line 17, after "hexagonal," strike out "ends" and insert "nuts." In line 27, after the words "10-inch," strike out "leaves" and insert "covers," so as to read "10-inch covers." In line 28, after the word "in," at the beginning of the line, strike out "by" and insert "over," so as to read "in over the 10-inch shell room."

On page 148, line 19, after the words "the way I found the," strike out "deck" and insert "wreck."

The JUDGE-ADVOCATE. Is your testimony, as now amended, correct?

Gunner's Mate OLSEN. Yes, sir.

The court then (at 4.40 o'clock p. m.) adjourned until to-morrow, the 26th instant, at 10 o'clock a. m.

SIXTH DAY.

U. S. L. H. TENDER MANGROVE,
Harbor of Havana, 10 a. m. Saturday, February 26, 1898.

The court met pursuant to the adjournment of yesterday, the 25th instant.

Present: All the members of the court, the judge-advocate, and the stenographer.

Captain Sigsbee had not yet appeared.

The record of the proceedings of yesterday, the fifth day of the inquiry, was read and approved.

The court then took a recess, ready to assemble at any moment when any additional evidence might be ready to be presented to the court.

The court (at 12 o'clock noon) took a recess until 1.30 o'clock p. m.

The court reassembled at the expiration of the recess.

Present: All the members of the court, the judge-advocate, the stenographer, and Captain Sigsbee.

Mr. HENRY DRAIN, who acted as interpreter before the court yesterday, appeared as a witness before the court, and was duly sworn by the president.

Examined by the JUDGE-ADVOCATE:

Q. Please give your name, residence, and profession.

A. Henry Drain, 91 San Lazero street, Havana; clerk in the United States consulate at Havana.

Q. Do you know of an anonymus letter received by the consul-general in regard to the explosion of the *Maine*?

A. I do.

Q. Can you produce it?

A. I can. [Witness produces letter.]

Q. What is the date?

A. February 18, 1898.

Q. Is there any signature to it?
A. No signature. It is signed "An admirer."
Q. Have you read the letter?
A. I have.
Q. Is it the document of an educated man?
A. I would say a man of common education, as far as I can judge.
Q. In what language is it written?
A. In Spanish.
The letter was shown to the court.)
Q. Have you made a correct translation of this letter?
A. To the best of my ability, I have.
Q. Please produce the translation.
The translation of the letter referred to was handed to the judge-vocate, and by him read aloud.)
The JUDGE-ADVOCATE. If the court please, I ask permission to pend this letter to the record.
The request was granted, and said letter is appended hereto, rked F.)
Q. Has anything been done to ascertain the truth of the statements itained in this letter?
A. I myself tried to discover the whereabouts of this Pepe Taco, l the one to whom I spoke said that the name was a mistake; that Pepe Taco mentioned had died a few days before the explosion of *Maine*, and that the letter referred to a Pepe Barquin; that he also l died suddenly about two or three days after the explosion of the *ine*.
Q. Who was your informant?
A. Mr. Charles Carbonell.
Q. How do you suppose he knows so much about this?
A. In the first place, he is an American citizen, and interested in thing that pertains to the matter. I think he brought to General s attention the clipping from La Lucha, and this letter. He told that his boatman gave him the information of the death of this . His boatman lives in Reglas.
Q. Did you ask General Lee to look into this matter?
A. I did, and he did not know just what to do, saying he has no secret-ce money; but he told me to consult with Mr. Carbonell, who d probably know more about it than anybody else.
Q. Do you consider Mr. Carbonell a perfectly reliable man?
A. I do, from having known him several years.
Q. Could it not be ascertained whether this dead man's family have y moved from a poorhouse into a good one?
A. I think it could.
Q. Will you kindly have it tried?
A. I will try. I was consulting with him yesterday afternoon. He he would send his boatman to see about it. I think it would be r to send some reliable person.
Q. I suppose you informed Consul-General Lee that the court would d to have the matter of the letter investigated?
A. I did.
e witness here stated that in the evidence given by witness of ous day the latter spoke of a man whom he had consulted in d to giving the evidence which he gave before the court. The ss now states that man's name to be Aurelio Pla.

By the JUDGE-ADVOCATE:

Q. Do you know anything of this Aurelio Pla?

A. I never heard of him, sir.

Q. Who told you it was Aurelio Pla?

A. The witness himself came up to the consulate this morning.

The testimony of the witness was then read over to him by the stenographer, and by him pronounced correct. The witness then withdrew, after being cautioned by the president not to converse about matters pertaining to the inquiry.

The JUDGE-ADVOCATE. I ask that Captain Sigsbee take the stand.

Capt. CHARLES D. SIGSBEE, U. S. Navy, heretofore examined as a witness, resumed the stand, and was cautioned by the president that the oath previously taken by him was still binding.

Examined by the JUDGE-ADVOCATE:

Q. I have a letter here, Captain Sigsbee, which was sent to me by the chief constructor of the Navy, which purports to be a copy of a letter sent by you, dated June 30, 1897, at Hampton Roads, to the commandant of the navy-yard and station at Norfolk. I will read this letter to you.

(The judge-advocate then read aloud the letter above referred to.)

Q. As far as you can remember, you think this is a correct copy of your letter?

A. I think so.

The JUDGE-ADVOCATE. I ask permission of the court to append this letter to the record.

Permission was granted, and the letter above referred to is hereto appended, marked "G."

By the JUDGE-ADVOCATE:

Q. What changes do you know of having been been made in the storage rooms of the *Maine* and the shell rooms of the *Maine*, as stated in this letter, from June 30, 1897, up to the time of her explosion?

A. I could not give it in figures. I think there has been considerable change in the 6-inch reserve magazine forward, because we have done a good deal of saluting. I had so many figures to remember that I could not tell exactly. I want to see first how many shell there were. (After examination.) I think there were several more shell stowed in the forward 10-inch loading room and forward 10-inch passing room. A great deal of the small-arm ammunition shown in the forward fixed-ammunition room had been discharged, sent on shore, on the acquisition of the new navy rifle. We had just gotten in, before leaving Key West, a new supply of the new ammunition. I have forgotten whether it was our complete supply. It came at a time when I was exceedingly busy, looking forward to coming to Havana.

(Lieutenant-Commander Wainwright here entered the court.)

The WITNESS. I know we had 6,000 rounds before we got the last supply. Mr. Holman could state the exact amount of that. Although we had had target firing after this letter was written, we had practically filled up again on going to Norfolk the last time; so that I take it, except perhaps in regard to stuff stowed in the 6-inch reserve magazine forward and in the fixed ammunition room forward, at the time of the explosion the state of things was practically as shown in that letter.

Q. Do you know where the additional charges for the new rifle were stowed when they were received on board; in the forward or in the after fixed ammunition room?

A. My impression is that they were stowed forward.

Q. You spoke of the changes in the 6-inch reserve magazine, and

hen you spoke of saluting. The changes you refer to apply to saluting owder?

A. Chiefly; but I have also understood that there was very little left that magazine. It was probably put in other places—in the regular inch.

Q. Do you remember when the last changes were made in your magzines, taking powder out of the reserve and stowing them in the regular magazines?

A. No; I do not remember. It was probably referred to me at the me. It undoubtedly was, but I can not now recall. I suppose three onths ago I visited all the magazines and shell rooms, personally, and spected them, going over every one and examining them in detail, t I have not the happy faculty of remembering details and figures.

Q. In a part of your letter here, you speak of the after torpedo head d fixed-ammunition room. Are those one compartment?

A. No.

Q. The torpedo heads are stowed in a different compartment from e fixed ammunition?

A. Yes, sir.

Q. Forward of it?

A. Yes; it is forward of it.

Q. When you wrote this letter you gave a statement of all the mmunition that was in the different compartments, and there is no tement of high explosives or gun cotton, or detonators, or any other terial which the regulations prohibit from being in magazines and ell rooms. None of that material is mentioned in this letter. In at respect the letter is correct?

A. The letter is correct.

Q. Was that also the state of affairs in regard to such material on e day of the explosion?

A. It was.

Q. You are quite certain that no torpedo warhead was fitted to a rpedo on board the *Maine* the day of the explosion?

A. I am certain I gave no order to fit them, and it was well known the executive officer that I did not intend to fit them.

Q. Did you enter the harbor of Havana with a torpedo warhead ed?

A. No.

By the COURT:

Q. Did you, at any time subsequent to your entry of the harbor, have warheads on any of the torpedoes?

A. The warheads have not been disturbed in any respect since I have d command of the ship.

The testimony of the witness was then read over to him by the nographer, and by him pronounced correct.

The witness then left the witness stand and resumed his seat in the rt room.

Lieut. Commander RICHARD WAINWRIGHT, U. S. Navy, a witness retofore examined, resumed the witness stand, and was cautioned by president that the oath previously taken by him was still binding.

Examined by the JUDGE-ADVOCATE:

Q. I believe, Mr. Wainwright, that you were on board the *Maine* all time during her last stay in Havana?

A. Yes, sir.

Q. Were you on board the whole day on the evening of which the explosion occurred?

A. Yes, sir.

Q. Are you certain that no warheads were fitted to the torpedoes of the *Maine* on that day?

A. I am positive of it. It could not have been done without my seeing it. I knew what work was going on on the torpedoes, always. I took a special interest in them and consulted frequently with the officer in charge of the division. The Captain has ordered us not to put the warheads on. I mentioned the subject of the warheads to the commanding officer at least twice, and both times he told me not to do so.

Q. Had the warheads ever been fitted to the torpedoes at any time while you were executive officer of the *Maine*?

A. They had not.

Q. Do you remember when there was any large transfer of ammunition from one magazine into another on board the *Maine*?

A. None during my stay on board, to my knowledge.

Q. Then you do not believe that any large amount of 6-inch charges had been taken out of the reserve 6-inch magazine and sent to the others?

A. I should say not, during the two months and over I was on board.

Q. As you were on board the *Maine* during her last stay in Havana, and were frequently on deck, did it ever occur to you that the ship was almost always swinging in any certain direction?

A. A large portion of the time the wind was to the eastward, and we always swung to the wind, generally a little to the southward of east, as I remember now, though I am not positive about the points of the compass. We generally pointed to the eastern shore.

Q. Do you consider that the way she swung at the time she blew up was an unusual way for her to swing?

A. I never remember her swinging in that direction—remaining in that direction—for any length of time. She probably swung past that direction several times, but not to remain in that direction for any length of time.

Q. Are you able to testify whether she was heading in that direction for any length of time previous to the explosion?

A. Not in the absolute direction she is now; but after the usual morning drill, I directed the officer of the deck to get up the gallery target and rifle. They placed that always on the starboard turret, forward. Therefore we would have to fire in the direction of the keel. The officer of the deck, after some little time had elapsed, said that we were swinging in the general direction of the *Alfonso* and the other Spanish vessel. He asked me if it was safe to fire, and I told him not to fire. I thought it was safe, but I considered it better not to fire in the direction of those ships. We held that general direction, which was quite as much toward the shore as we were afterwards, but more to the westward than usual, but not as much as she was when she went down. As far as I can remember, she was heading in the general direction in which she went down when the *City of Washington* came in, and remained about in that direction up to the time of the explosion.

Q. Could you tell us how the *City of Washington* was lying at the time of the explosion, in regard to the *Maine*?

A. She was on the port quarter of the *Maine*, at a distance of about 400 feet, I should say. I thought she was too close to swing properly, only I knew that almost every vessel followed the direction of the wind, and there was very little danger of fouling.

Q. Was she heading in the same direction as the *Maine?*
A. The same general direction—yes, sir.

There being no further question to ask, the testimony of the witness s read over to him by the stenographer, and by him pronounced rect.

The witness then left the witness stand and resumed his seat in the irt room.

Ensign POWELSON here entered the court.

The JUDGE-ADVOCATE. Mr. Powelson, is the testimony given by 1 yesterday, as recorded, correct?

Ensign POWELSON. It is, with the exception of the corrections which ave made.

The JUDGE-ADVOCATE. Please give them to the stenographer.

Ensign POWELSON. On page 201, in the ninth line from the bottom, ne inch" should read "a quarter inch."

On page 203, in the thirteenth line from the bottom, insert "plating" r "bottom."

On page 204, in line 10, scratch out the word "at." In the fourth from the bottom insert "are" between "and" and "about." The line should read "wing of after plating and the starboard wing of ard plating. The V occurs at about frame 15."

On page 205, in the eleventh line from the bottom, after "but" omit rything down to the sentence commencing in the next line with "All r sluice valves."

On page 207, in the ninth line from the bottom, change "calk" to k."

On page 208, in the ninth line, change "main" to "berth." In the th line from the bottom "eleven" should read "seventeen."

The JUDGE-ADVOCATE. Is your testimony as now amended correct?

Ensign POWELSON. Yes, sir.

Ensign POWELSON, U. S. Navy, resumed the witness stand, and was oned by the president that the oath previously taken by him was binding.

Examined by the JUDGE-ADVOCATE:

Since you gave your testimony yesterday, have you received a of specifications of the *Maine?*

I have; yes, sir.

Have you done anything toward verifying your testimony by book in regard to the thickness of the plates that you referred to r testimony?

I do not think I mentioned the thickness of any plates in my tes- y.

But by reading the book and seeing the thickness of the plates n tell whether you are sure in your surmises.

I have looked over the drawings again with reference to what I n my last testimony. The only plates to which I could refer for ess would be those of the protective deck. Those that I meas- were 1 inch in thickness.

By the COURT:

Double plating?

Double plating, each 1 inch in thickness. (After examination of Forty pounds per square foot. That is, 1 inch plating.

Q. You spoke of a plate which had green paint on it. Did you verify the thickness of that with what you testified to by the specifications?

A. No, sir; I did not.

The JUDGE-ADVOCATE. I would like to say to the court that Mr. Powelson has some additional testimony to give. All this forenoon he has worked in unison with the diver, and the diver has made explanations to him which it would be impossible, so it is thought by Mr. Wainwright, who is in charge of that work, to give to the court intelligibly by the diver. I would request that the diver, Olsen, be admitted to the court room while Mr. Powelson gives his testimony, in order to correct him in anything he might not state correctly, and in that way we will get the testimony of the two men who worked together at the same time.

Permission was granted, and Gunner's Mate Olsen entered the court and was warned by the president that the oath previously taken by him was still binding

By the JUDGE-ADVOCATE:

Q. Olsen, Mr. Powelson is going to give testimony in regard to your work and his work this morning. You reported to him, and he has put the work together, and is going to testify. If he says anything at all which is not exactly according to your recollection, you must at once state it and correct him.

A. All right, sir.

The examination of Ensign POWELSON was then resumed.

Examined by the JUDGE-ADVOCATE:

Q. Mr. Powelson, we are now ready for your additional testimony.

A. On February 26, to-day, at 10 a. m., Diver Olsen reported to me on coming up from below that he had followed the forward and after wings of the V-shape made by the bottom plating at frame 17. He said on the forward wing of the V the plates ran down on a very steep slant, and then turned under and out under the starboard side. That just above where the plates turned to go under the starboard side he found two dents, as if the plating had been bulged in between the frames from outside in.

By the COURT:

Q. How big were those?

A. He reported to me in this way: He held up his hands at a distance which I measured with a ruler. He said they were about 2½ feet long and bulged in about 6 inches, if I remember correctly. He then went down again, and came to the surface at 11 o'clock. I asked him what he saw, and he said: "I think I have found the flat keel." I asked him what reasons he had for thinking this. Then he made me a sketch in the notebook which I have in my hand. This sketch is approximately the shape of the section at about frame 10 or 11.

(The sketch referred to by the witness was shown to the court.)

On this sketch he has correctly arranged the garboard strake, showing that his idea of the construction was correct. He reported that the keel was sloping downward about 45 degrees and to port, with the after part of the keep uppermost. I then asked him to describe to me the method in which he managed to reach the keel, as the V formed by the bottom plating at frame 17 spread out at the water line. He told me that after going down some distance under the water, these two wings of the bottom plating again converged, so that he was able to put

his feet against one wing and his back against the other and support himself. There was nothing to stand on below. He said he put his back against the after wing and his feet against the forward wing and worked himself from port to starboard. He drew a sketch to illustrate to me the manner in which he did it.

(The sketch referred to by the witness was shown to the court.)

The WITNESS. He felt along the forward wing with his right hand, wedging himself between the forward and after wings. With his right hand he felt an angle in the plate. He ran his hand along it, and found on the other side of the angle a flat piece of plate. He ran his hand along a little farther, and found another angle. He ran his arm around the angle, and up, until he found the edge of the plate, which he described by a measurement I took between his hands as he held them up, as being about 10 inches. He said the flat plate was about 16 inches in width between the two angles to which I have referred. I took this measurement with a ruler, Olsen holding up his hands. Then he told me that he reached around to feel still farther, and in doing so lost his balance and fell down. I asked him if he struck bottom. He said that he did not; that he brought up on the life line. He then signaled to the attendant on the scow to pull him up. He told me that the plate next to the point which he had just felt when he fell over—as I took it, the starboard edge of the outer flat keel plate—was lapped under the keel plate, which is the construction with the garboard strake. I then asked him if he had explored any of the after wing of the V. He told me that he had. He told me that he had found a semicircular hole about two feet in diameter, with rivet holes all around it.

I asked him about how far on this plating that semicircular hole was from the top of the V made by the bottom plating. He told me it was about 20 feet. I asked him whether the edge of the plate at which he found this semicircular hole was the natural edge, with rivet holes, or whether it presented a jagged appearance. He told me that the plate at this point presented a jagged appearance, as if it had been torn. He also told me that a crack had extended from the bottom edge of the semicircular hole to a distance of about 8 inches, and that the plates about this hole were bent away from the green side of the plating. He told me that he followed the after wing still farther, and at a point about 25 feet from the angle of the V he found a plate about 2 feet 6 inches in width, from a measurement I took from his hands as he indicated the width, and that this plate was at right angles to the inside plating and at right angles to the edge of the plating. He told me that this plate had a round hole cut in it. I then asked him to be particular about the direction in which he found the keel. I drew a sketch, indicating a direction upward and a direction to port and a direction to starboard, and I asked him to draw upon this sketch a direction of the keel looking from aft forward. He did so, and this is the sketch.

(The sketch above referred to by the witness was shown to the court.)

The WITNESS. The line sloped about 65 degrees below the horizontal down and to port. I then made another sketch indicating forward, aft, starboard, and port, and I asked him to draw the position of the keel upon this sketch, looking down upon it. This is the sketch that he drew me.

(The sketch above referred to by the witness was shown to the court.)

The WITNESS: That shows a line from port to starboard, the port end about 80 degrees in azimuth from a head. He told me that the highest point of this keel was the starboard part. The point where he found the keel, he told me, was about 20 feet under water. I asked

him why he did not follow the keel up farther, and he told me that the platings between which he was wedged opened out so that he had nothing to support him. I asked him if he could see any more of the keel above, and he said he could see the keel for 5 feet. I asked him if the keel ended there, and he said no, it continued still farther. He then told me that the general direction of the keel was parallel to the upper edge of the forward wing of the V-shaped plating at frame 17. This is what it should be, by a deduction from the appearance of the plating above. When I got on board the *Fern* I showed Olsen a plan of the ship, having sections at frame 6 and at frame 16. I pointed to the frame at 16, and I asked him if the angle he felt was as great as that at frame 16 on the plan. He told me that the angle was not. I am now referring to the angle made by the flat plate of the keel and the plating on the port side.

I then pointed to frame 6, and I asked him if the angle he saw was as sharp as that at frame 6. He told me that it was not. This, then, would make the point at which it found the keel, according to his statement, somewhere between frame 16 and frame 6. Now, frame 17 is at the water's edge, and as he went down on the forward wing of the V-plating, he went forward, as the ship was in its original position. He says he went down 20 feet. This would put him, as the frame spacing here is 3 feet 6 inches, about six frame spaces, or he was at that time at about frame 10, which checks up very well with his statement as to the angles at frame 16 and frame 6. On the plan of the inner-bottom drainage system, I find there is an opening in the ship's side for sea suction along the edge of the plating where Olsen said he found it, and at a distance of 21 feet from the angle of the V. Olsen told me that he found it at 20 feet, which agrees very closely.

By the COURT:

Q. That is, in which direction?

A. Along the edge of the plating.

By the JUDGE-ADVOCATE:

Q. Are you now through with what Olsen told you?

A. Yes, sir; I am through with what Olsen told me.

The JUDGE-ADVOCATE. I ask that Olsen be directed to withdraw, and to stand by for recall.

Gunner's Mate Olsen then withdrew, after being directed to stand by for recall, and cautioned not to converse about matters pertaining to the inquiry.

The witness Powelson then produced the drainage plans, and testified as follows:

At frame 18, the second longitudinal, is where I found the sluice valve. Olsen testified that at about 20 feet from the sluice valve he found an opening in the ship's side. The sea suction in compartment A-10 follows the direction taken by Olsen, and is situated about 21 feet from the sluice valve, which checks up very well. I found some boarding forward of frame 17. This boarding was originally horizontal, and next the ship's side, under the pieces of the protective deck to which I have already referred, and of which I have made a sketch. These boards are now in an almost vertical position, and the plating is now away from the after end of these boards in a plane almost at right angles to them. If you consider the section of the ship between frames 18 and 13, and consider that the part of the bottom plating between frame 18 and frame 15 is bent out at a right angle, and then that the whole section is turned forward through 90°, you will picture the

position in which the plates are now found. This plating could either have been shoved out from the after side or it could have been pushed in from the forward side. The only indication as to how this was done is the wooden boarding. If the after part of the plating had been pushed out from the inside, the boarding would have broken at the V which the plates make. If the forward part of the plating had been pushed in, the boards would have been pulled away from the after plating, as is the case with the plates now. In other words, the side of the ship between frames 13 and 18 has two V's. Frame 17 has been pushed in, forming a V from a point 4 feet above the second longitudinal downward. The plating has been pushed in at about frame 15, from a point 4 feet above the second longitudinal forward.

By the COURT:

Q. All you have told us relates to the part of the ship between frames 18 and 24?

A. Yes, sir; and from frames 13 to 24. I sent the diver down, and he found where that piece of protective deck is fast to the outside plating. He found that, and when it got down there by the protective deck a lot of cellulose came up, showing he was walking in the cellulose compartment.

Q. That piece of plating is fastened to the starboard side of the ship, is it?

A. The port side. You can see it, sir.

Q. There is no hole in the outside plating at that point?

A. It is torn. I do not know where the rest of it is.

Q. Was he able to follow the after side of the V until he came to the end of that?

A. The forward side of the V took him right up toward the waterways of the spar deck, where that V is turned. It starts down and is broken off. All that you can see going along horizontally is fastened to the deck. He followed the forward wing, and went around down in under the ship, and the keel is fast to the forward wing.

By the JUDGE-ADVOCATE:

Q. From your knowledge of the *Maine* and the drawings of the *Maine*, how do you look upon the information that diver Olsen gave you?

A. I think it is extremely accurate.

The JUDGE-ADVOCATE. Shall I ask the witness what deduction he derives from all this?

The COURT. Yes; you can.

By the JUDGE-ADVOCATE:

Q. What do you deduce from this information received from the diver this forenoon, together with such information as you had before?

A. I think that an explosion occurred on the port side somewhere about frame 18, center of impact.

Q. Would you put 18 as the center of impact? Because it seems to me that has to be taken in connection with other injuries.

A. Frame 18 was the water-tight bulkhead, and consequently was stronger than frame 16. The ship yielded at 17, and also yielded at 15. It is pretty hard to say where it came. Frame 15 was blown in.

Q. You see everything at frame 26 is gone?

A. Yes, sir; there is nothing there. I should say, then, between frames 16 and 18 was the center of impact, and that this was under the ship, a little on the port side.

Q. How far from the keel?

A. Frame 17 is broken off at the third longitudinal, approximately, so that I should say the distance from the keel would be 15 feet in a horizontal line.

By the JUDGE-ADVOCATE:

Q. How high up would that be, up the ship's side from the keel?

A. That point of the ship's side is about 10 feet above the plane of the keel.

Q. Ten vertical feet?

A. Yes, sir.

Q. How do you account for the immense damage done abreast of the reserve magazine, where there is nothing left, whereas between frames 16 and 18 you have found damaged plates?

A. My idea is that after the ship was raised up at frame 18, the magazines, one or all of them, after that were exploded, for some powder tanks that I have seen I think were exploded, while others I have seen were not exploded. I saw a coffee can that was brought up this morning which was about as badly battered as most of the powder cases that came up. It looked in very much the same condition.

Q. When you say some of the powder tanks had, in your opinion, exploded, and some had not, do you refer to 6-inch tanks only or to 10-inch tanks also?

A. I refer to both, as I have seen a 6-inch tank that was very little ripped open, and I saw one this morning that had been first opened and flattened out, with evidences of burnt powder upon it. I saw one 10-inch tank that was scarcely battered at all, and only the head of it gone. I also saw 10-inch tanks with the packing, which looked like excelsior, unburnt; so that, in my opinion, some but not all of the 10-inch and 6-inch charges were exploded.

Q. Do you know how many tanks were brought up this morning?

A. The divers started getting tanks so late in the forenoon that they did not get many. I think probably four or five.

Q. And of these how many were exploded and how many were not?

A. I did not see all of them. The only one I remember distinctly was the one to which I have referred, which was exploded and burst out, so that the case formed almost a plane surface.

Q. You say one had the head gone. Did you see that one?

A. I saw the 10-inch tank with the head gone. That was not brought up this morning. It had preserved its proximate shape, and did not look much more damaged than if it had been dropped or rolled down the staircase.

Q. Had the head of the cylinder been torn off?

A. The head of the cylinder was a removable head. The fastenings were still there.

Q. Who could give testimony about the tanks brought up to-day?

A. Ensign Brumby or Gunner Morgan.

By the COURT:

Q. I suppose you saw the 10 inch full tank that was recovered some days ago, did you?

A. No, sir; I did not see that tank, but I was told by the officer of the deck of the *Fern* that such tank had been recovered, and was now in the magazine of the *Fern*.

Q. Do you suppose you could make a perspective sketch of the different parts of the ship as you understand them to exist at present?

A. No, sir; I tried, but I have no talent at all for perspective drawing. I tried to do it.

Q. We would not expect a finished drawing, but I think you understand it better than anybody else.

A. I could try to do it, sir.

Q. I do not mean immediately, but putting together the sketches which you have obtained from time to time, so that if the board should return at some future day you might be able to give us a drawing which would show the present condition of the bottom of the ship?

A. I think I can get someone who does perspective drawing, tell him just what I want, and have him make it. I could tell whether it is correct or not when I see it, although I can not make it myself.

Q. I would like to ask whether you do not think that this same means carried away the body of the ship just forward of frame 26, that is, the forward part of the reserve 6-inch magazine, and produced the distortion that we have been discussing?

A. That question, sir, is rather a difficult one, because it brings in so much conjecture. If anything definite were known about the amount of powder that was under the ship——

Q. Or what shape it was in?

A. Or what shape it was in, you might draw some conclusion.

Q. Is it not likely that if there is a large hole in the ship abaft the point we have been discussing, say frame 18, and also if there were a large hole driven up through the ship at frame 26, is it not likely that that same force would be the force that lifted and distorted the ship at frame 18, 25 or 30 feet away?

A. I think a very heavy explosion farther aft than frame 18—as the ship was much weaker forward of frame 24 than aft—such an explosion of the forward body could have been produced by a force farther aft.

Q. It is only a question of the area of the effect of the explosion. It is not likely there were two outside forces.

The PRESIDENT. No; but suppose it were a mine, and if it were circular or spherical and placed in a certain position, say 10 or 15 feet from the keel, then the center of effort and the destruction produced would be around the center, and it would be circular; but if it were a cylinder and, instead of being parallel to the keel, it inclined from, say, frame 26, where it approached the keel, outward—not parallel to the keel, but crosswise across the bottom of the ship—then the destruction would be greatest at the after end.

A. That is such a difficult question that I think I would rather not answer.

By the COURT:

Q. Then I think I would not say definitely that it was at that particular place.

The PRESIDENT. Yes; he is basing his opinion now on what he has seen. When you come to take in the big hole, as we imagine it to be, that may have been produced by still another mine.

Q. It was only with reference to the question of fixing it definitely that I asked the question.

A. On the bottom forward, where that frame was thrown up, it would seem to me the force was communicated some distance through the water, because this thing was lifted up instead of being battered in. It was a force that was cushioned in some way, because the diver tells me there was a bulge in plates between the two frames, and such a force as that would be a cushion pressure. So, the plates not having been broken in, or anything of that kind, this explosion may have occurred aft, and the frames forward of the transverse armor being

weaker than they are aft, the ship might have been lifted up there by this cushion pressure from farther aft.

Q. You have never been down in a diving suit, have you?

A. No, sir; I never have. It struck me, as I was looking at it, that the mine there could not have been very close to those plates that were lifted up, because, as I say, the plates are not so much damaged as bent in the form of a V and raised up a vertical distance. It seemed to me that mine was somewhat removed, and the pressure came through the water, which produced that cushioned sort of pressure.

The testimony of the witness was then read over to him by the stenographer, and by him pronounced correct.

The witness then desired to add the following testimony:

I desire to amend my answer as to the center of impact of the explosion. Not being in possession of information as to the condition of the bottom plating aft of frame 18, I based my answer entirely upon what I had seen above water. If the bottom plating aft of frame 18 is in a broken condition from outside in, I should say that an explosion at this point could very easily have produced, by lifting that part of the ship, the corrugated appearance which the forward body at frames 18 and 15 now presents.

The additional testimony was then read over by the stenographer to the witness, and by him pronounced correct.

The witness then withdrew, after being cautioned by the president not to converse about matters relating to the inquiry.

Gunner's Mate OLSEN was then called before the court and warned by the president that the oath previously taken by him was still binding.

Examined by the JUDGE-ADVOCATE:

Q. You have heard the statements made by Mr. Powelson before this court in your presence. Are they correct in every way?

A. Yes; they are correct.

Q. All the statements that he told the court you had made to him—are they quoted correctly?

A. Yes, sir.

The testimony of the witness was then read over to him by the stenographer, and by him pronounced correct.

The witness then withdrew, after being cautioned by the president not to converse about matters relating to the inquiry.

The court then (at 5.15 o'clock p. m.) adjourned to meet at Key West, Fla., Monday, February 28, at 10 o'clock a. m.

SEVENTH DAY.

U. S. COURT-HOUSE, KEY WEST, FLA.,
Monday, February 28, 1898—10 a. m.

The court met pursuant to adjournment of Saturday, which adjournment took place on board the *Mangrove*, in the harbor of Havana. The court reconvened in the United States court-house at Key West, Fla.

Present: All the members of the court, the judge-advocate, and the stenographer.

Captain Sigsbee, who remained in Havana, informed the judge-advocate that he would waive the right to be present during the sessions of the court, provided the judge-advocate would inform him in case he considered Captain Sigsbee's presence necessary for his interests.

No other officer desired to be present at the meeting except Lieutenant-Commander Wainwright, who is also in Havana, and who desired to be present only when the testimony of the divers is being taken.

The record of the proceedings of Saturday, the sixth day of the inquiry, was read and approved.

Lieut. JOHN J. BLANDIN, U. S. Navy, appeared as a witness before the court, and was sworn by the president.

Examined by the JUDGE-ADVOCATE:

Q. Please state your name, rank, and to what ship you are attached at present.

A. Lieut. John J. Blandin, U. S. Navy, attached to the U. S. S. *Maine*.

Q. How long were you attached to the *Maine* before her destruction?

A. Since the 20th of June, 1897.

Q. What duty did you perform during that time?

A. Watch and division officer.

Q. What division did you have?

A. The fourth division.

Q. Is that the after division of the ship?

A. That was the after division of the ship.

Q. While in the harbor of Havana were you doing the duty of an officer of the deck?

A. I was.

Q. Do you know of any special orders that were issued by the commanding officer while in Havana in order to guard the ship more securely than at any other place?

A. The quarter watch was on watch all night. Small-arm ammunition was placed in the belts of the marines and of the quarter watch in the gun divisions, one hundred rounds. The boxes of 1-pounder and 6-pounder ammunition were stored in the cabin pantry (which is not used for anything else), the armory, and the pilot house. Sentries were posted on the forecastle and on the poop, with cartridges in their belts, but with orders not to load their pieces unless ordered by an officer. Orders were given to see that strict watch was kept, which was done. I think those were the principal precautions taken.

Q. During the time you stood watch in the harbor of Havana, did you ever know of any hostile demonstration afloat, in the way of boats approaching the ship that had to be warned off?

A. None whatever.

Q. On the night of the explosion were all the orders that you have just named faithfully carried out?

A. They were, sir.

Q. What was your duty on that night?

A. I had the watch from 8 until 12.

Q. P. m.?

A. P. m.

Q. What time did you relieve the deck?

A. At 8 o'clock. I relieved Lieutenant Blow.

Q. Had the 8 p. m. reports been made when you took the deck?

A. They were being made when I was relieving.

Q. Did you hear them made?

A. I did not.

Q. Mr. Blow received those reports?

A. The first lieutenant received them, sir.

Q. The reports of lights and fires. Who received those?

A. Those reports were received by Naval Cadet Cluverius, as I remember, just as I was relieving.

Q. What was Naval Cadet Cluverius doing there?

A. He was the midshipman who had two deck watches under Mr. Blow.

Q. Mr. Blow was there?

A. Mr. Blow was there, sir.

Q. When you took the deck, was everything reported perfectly secure to you, and the ordinary state of affairs?

A. Everything was perfectly normal. The usual reports were made.

Q. After 8 p. m. did you attend to your duties faithfully as an officer of the deck?

A. I did.

Q. Please state to the court fully your experience of the explosion, giving all the noises you heard, all the shocks you felt, and everything you can tell the court in regard to the matter.

A. After the third quarter watch at 9 o'clock was piped down, I was on the starboard side of the deck walking up and down. I looked over the side and then went over to the port side and took a look. I don't remember seeing any boats at all in sight. I thought at the time the harbor was very free from boats. I thought it was about 3 bells, and I walked over to the port side of the deck just abaft the after turret. Mr. Hood came up shortly afterwards and was talking to me when the explosion occurred. I am under the impression that there were two explosions, though I could not be sure of it. Mr. Hood started aft to get on the poop to lower the boats, I suppose, and I followed him. Something struck me on the head. My cap was in my hand. My head was slightly cut and I was partially knocked over, but not stunned. I climbed on the poop and went on the starboard side and found Captain Sigsbee there. I reported to him. He ordered the boats lowered at once to pick up any of the wounded. The officers very rapidly got on the poop, and there were one or two men there, but very few.

The barge and gig were lowered, and just then I heard a man crying out down on the quarter deck. I went to the ladder, and I saw Mr. Hood trying to pull a ventilator off the man's legs. He was lying in the wreckage; jammed there. The water then was not deep. I went down and helped Mr. Hood pull this ventilator off and carried the man on the poop, with the help of Private Loftus, I think it was. It was a private man. Then the captain told Mr. Wainwright to see if anything could be done to put out the fire. Mr. Wainwright went forward to the middle superstructure, and shortly afterwards came back and reported to the captain that it was hopeless to try to do anything. Then in a very few moments the captain decided that it was hopeless, and gave the order to abandon ship. Boats came from the *Alfonso Doce*, and two boats from the *City of Washington*, and those, with our boats, picked up the wounded and sent most of them, by the captain's order, to the *Alfonso*. There were thirty-four sent there. We abandoned ship, the captain getting in his gig after everybody had left, and went to the *City of Washington*.

Q. When you first felt the explosion did you notice any list of the ship?

A. None whatever.

Q. Was there a very severe shock where you were standing?

A. No; it was a shock, but I should not call it a very severe shock?

Q. I suppose you at once looked forward?

A. I at once looked over the port side, as I thought the explosion occurred on the port side, forward. That was my impression.

Q. Did you see any water thrown up?

A. Not a particle.

Q. Tell us what you did see go up in the air?

A. I didn't see anything go up in the air, but I saw all kinds of stuff falling down—wreckage.

Q. You saw no upshoot of flame?

A. Mr. Hood saw the flame. It was on the starboard side, and he looked to starboard.

Q. You saw none?

A. I saw a flare. I didn't see the actual flame.

Q. You spoke of ammunition being stowed forward for ready use. Will you please state where that was stowed?

A. In the pilot house.

Q. How high up is the pilot house? It is some distance above the superstructure deck, is it not?

A. It is about 10 feet, I should say, above the superstructure deck.

Q. There was no ammunition forward below that?

A. None below that; no, sir. This was only secondary battery ammunition that was in the pilot house.

Q. How was the ship swinging at the time of that explosion?

A. She was riding to the ebb current.

Q. The ship is now lying pointing almost toward the admiralty house or Machina. I suppose that is the way she was when she exploded?

A. I don't remember her heading, but the *Alfonso* was on our starboard quarter, the little gunboat was almost astern, and the *City of Washington* was on our port quarter.

Q. Would you be able to tell the court whether she was riding in an unusual direction for that harbor?

A. It didn't strike me so from the general appearance. I took no notice of her heading. She swung around the buoy for three weeks, about. She had probably been on every heading.

Q. Did she seem to be pretty steady on that heading that night?

A. Yes, sir.

Q. She was heading steadily in that direction?

A. She seemed to be. I had no cause to suspect any change.

Q. You know that ships swing a great deal in the harbor of Havana. Could you not tell us whether, from the time you took the deck until the time of the explosion, the *Maine* seemed to be heading almost steadily in one direction?

A. So far as I know, she was, from the bearings of other ships.

By the COURT:

Q. Were you so situated that you could see the point at which the explosion took place?

A. No, sir; I was abaft the after turret and could see on the port side well aft, but the turret bulges a little and would cut off the sight of the side of the ship forward of the gangway. I do not know where the explosion took place, but my impression is it was on the port side forward.

Q. You were not so situated that you could have seen the burst of flame or the effect of the first explosion—whether it was thrown up?

A. I could have seen the burst of flame where I was if I had looked in that direction. I looked over the port side. I saw the glare as it

went up, but I didn't see this burst of flame that others have described. That was more amidships.

Q. You did not notice any ascent of a column of water as the result of the explosion?

A. None at all, and none fell, to my knowledge. None fell on me, and I saw none fall around me.

Q. How soon after the explosion do you think the forward part of the ship was under water?

A. The forward part, almost within a minute. I should estimate that, at the most, two minutes after the explosion the quarter deck was knee deep in water. She was on bottom in, I think, less than three minutes, all over.

Q. You say you heard two explosions?

A. That is my impression, sir; though I could not be positive. I think there were two.

Q. Similar explosions?

A. So far as I can judge, sir. When the first explosion took place the ship quivered. The shock, as I said, was not so great where I was, and my impression is there was a second one, but the difference in similarity I could not describe.

Q. As I understand, Mr. Blandin, you only saw the fragments coming down?

A. Yes, sir.

Q. You did not see anything go up?

A. No, sir.

Q. So that whatever was thrown upward was not under your observation?

A. No, sir; I really saw very little coming down, but I heard them and felt them.

Q. Was there any perceptible upheaval of the ship that you noticed?

A. Not that I noticed; no, sir.

By the JUDGE-ADVOCATE:

Q. Were you riding head to the wind?

A. There was practically no wind. It was, if anything, a very light air.

The judge-advocate requested that the testimony given by the witness be not read to him by the stenographer, but that he be directed to report to-morrow morning at 10 o'clock, when he will be furnished with so much of the record as contains his testimony, and asked to withdraw for the consideration of the same, upon the completion of which he will be again called before the court, and be given an opportunity to amend his testimony as recorded, or pronounce it correct. The request was granted, and the witness was instructed accordingly; whereupon he withdrew, after being cautioned by the president not to discuss matters pertaining to the inquiry.

Lieut. JOHN HOOD, U. S. Navy, appeared as a witness before the court, and was sworn by the president:

Examined by the JUDGE-ADVOCATE:

Q. Please state your full name, rank, and to what ship you are attached.

A. John Hood, lieutenant, U. S. Navy, attached to the late U. S. S. *Maine*.

Q. Since when have you been attached to the *Maine*?

A. Since November 5, 1897.

Q. What was your duty during that time?

A. My duty was as watch officer.

Q. Senior watch officer?

A. Senior watch officer.

Q. In charge of the powder division?

A. Yes, sir; in charge of the powder division and the torpedo division.

Q. Since you have been senior watch officer in charge of the powder division have you been down in the magazines and shell rooms?

A. I have been through all of them.

Q. Do you know of any matter being stowed in the shell rooms or magazines which was prohibited by ordnance instructions and regulations from being stowed there?

A. I do not. I inspected all the magazines after I joined the ship, and saw them all properly stowed. I saw nothing there except the proper and authorized articles.

Q. You consider that on the night of the explosion there was existing the same state of affairs—no violation of the ordnance regulations in regard to the stowage of explosives?

A. I do. I did not inspect it then, but I am absolutely sure that there was nothing done beyond the ordinary work down there.

Q. Who was acting in the gunner's place at the time of the explosion, and who had been for some time previously?

A. Chief Gunner's Mate Brofelt.

Q. What is the record and character of that man?

A. His record and character are both excellent. He is a very excellent man, a thoroughly reliable man, and a very intelligent man.

Q. Whenever the magazines or shell rooms are open for drill or otherwise are the keys always returned to the captain and the magazines and shell rooms reported locked?

A. The keys are always returned. The magazine is reported closed. The report is made to the officer of the deck, and by him to the captain. The keys are never gotten out except by a report, first, to the officer of the deck, as to what they are wanted for. That report has to be turned in to the captain, and the captain sends them out.

Q. Do you remember whether on the day of the explosion, February 15, the magazines or shell rooms had been opened for any purpose?

A. They were not opened that day for drill; but it is the routine of the ship to open them to take the temperature. That I had nothing to do with personally. I know that is the routine of the ship.

Q. The temperature can be taken from the small plate holes, can it not?

A. Yes.

Q. And it is done that way?

A. It can be taken through the small holes. I never examined that personally at all. All the magazines were opened the day before at drill, and I passed up and down through all the magazines of the ship.

Q. That was Monday gunnery drill there?

A. Gunnery drill day.

Q. Did you ever pay any attention to the temperature of magazines and shell rooms?

A. No; that was not my special business. I noticed the temperature of the magazines myself when I was in them, but that was all.

Q. Which were the hottest magazines?

A. The hottest magazines were what we called amidship magazines; the midship 10-inch and 6-inch.

Q. Which is the midship, the forward or the after 10-inch?

A. The after 10-inch, down between the engine room and fire room, and they were much warmer than any of the forward magazines. The forward magazines were comparatively cool.

Q. During drill, were all regulations properly carried out in regard to men going down to magazines and shell rooms?

A. I think I am sure they were. They were, so far as I know.

Q. You had no drills since Monday forenoon, the day before?

A. I had no drill after Monday forenoon, the day before.

Q. Do you know where the rockets were stowed?

A. They were stowed on deck, aft somewhere. I never paid any attention to that, because I had nothing to do with that.

Q. I suppose a few were in the pilot house?

A. A few were always up in the pilot house for use. That is all I ever looked at.

Q. While you were officer of the deck, in the harbor of Havana, were there any special regulations made by your commanding officer, and any special orders given in regard to keeping an extra lookout; and, if so, were they faithfully carried out?

A. They were, while I was on watch. Of course, I did not see it all the time.

Q. That is what I mean. Did you ever notice any hostile demonstration afloat in the way of boats approaching the ship that had to be warned off?

A. No; I never saw any demonstration of any kind afloat. The only passing crafts were ordinary passing boats, and they were all hailed as they went along.

Q. Where were the torpedo war heads stowed?

A. They were stowed in the storeroom for them, down underneath the forward end of the wardroom.

Q. When had they been handled last before the explosion?

A. About the 26th or 27th of December, if I recollect right. They were taken up just at the end of December and weighed, and restowed again, and they had not been touched since.

Q. No torpedo war heads were fitted at the time of the explosion?

A. No, sir; no torpedo war heads were out of the torpedo storeroom.

Q. Do you remember the kind of ammunition and, as near as you can tell us, the amount that was stowed in the reserve 6-inch magazine?

A. The reserve 6-inch magazine struck me as being practically empty when I went through it. I didn't take any account of the stock, but there was very little ammunition of any kind in it, and the gunner who went through the magazine with me told me that he had the saluting charges and a few extra shell stowed in there, I think. I am not sure about that, but it was a very small quantity of ammunition of any kind that was stowed in that reserve magazine.

Q. On June 30, 1897, it was reported that there was quite an amount of 6-inch charges there. Do you know whether there were any there at the time of the explosion?

A. I do not know. I did not take any account of the stock there.

Q. Are there any wooden linings to the magazines of the *Maine*?

A. There were gratings on the floors, but I don't recollect how the sides of the magazines were fitted.

Q. During your inspections, did you notice whether there were any electric wires which might endanger the magazines?

A. I never saw any wires there except the light wires which were in the light box. They were not in the magazines.

Q. Did you notice any steam pipes which might endanger the magazines?

A. No, sir; I don't think there were any steam pipes in the magazines at all.

Q. I believe, in answer to a previous question, you stated that while you were officer of the deck all ordnance regulations were faithfully carried out. I believe you were on deck at the time of the explosion. For how long previous to that moment were you on deck?

A. I came on deck about half past 9. It may have been a little before that; and the explosion occurred about 9.40. It might have been a little longer. I was on deck probably about fifteen minutes.

Q. Could you state whether proper vigilance was exercised or not in respect to these orders?

A. The men were on watch on deck and all the sentries were posted.

Q. The officers were at their stations?

A. No other officer was on deck except the officer of the deck and myself. The officer of the deck was on deck at his station, but there was no other officer on deck that I saw.

Q. Did you notice which way the ship was riding?

A. I did.

Q. From your experience while at Havana, did you think she was riding in an unusual way or in a way in which she had frequently been riding?

A. She was riding in a direction that I never remember having seen her ride in before.

Q. Was she heading steadily in that direction, so far as you could judge?

A. Just at that time she was pretty still.

Q. Will you please state to the court your experience of the explosion in full—what you felt, what you heard, and what you saw.

A. I was sitting on the port side of the deck with my feet on the rail, and I both heard and felt—felt more than I heard—a big explosion, that sounded and felt like an under-water explosion. I was under the impression that it came from forward, starboard, at the time. I instantly turned my head, and the instant I turned my head there was a second explosion. I saw the whole starboard side of the deck and everything above it as far aft as the after end of the superstructure spring up in the air with all kinds of objects in it—a regular crater-like performance, with flames and everything else coming up. I immediately sprang myself behind the edge of the superstructure, as there were a number of objects flying in my direction, for shelter. I ran very quickly aft, as fast as I could, along the after end of the superstructure, and climbed up on a kind of step. I went under the barge, and by the time I went up on the superstructure this explosion had passed. The objects had stopped flying around. Then I saw on the starboard side there was an immense mass of foaming water and wreckage and groaning men out there. It was scattered around in a circle, I should say about a hundred yards in diameter, off on the starboard side. I immediately proceeded to lower the gig, with the help of another man. After I got that in the water several officers jumped in it and one or two men. In the meantime somebody else was lowering the other boat on the port side. I heard some groans forward, and ran forward on the quarter deck down the poop ladder, and I immediately brought up on an immense pile of wreckage. I saw one man there, who had been thrown from somewhere, pinned down by a ventilator.

The COURT. May I interrupt Mr. Hood a moment. He said several officers jumped into the gig. He does not say for what purpose or what they did. That might leave a bad impression unless he states what the object was.

A. They jumped into the gig, commanded to pick up these wounded men whom we heard out in the water. The orders had been given by the captain and the executive officer to lower the boats as soon as they came on deck. I spoke of lowering the gig, because I was on the deck before they got up there, and began to lower it anyway, to pick up these men. As I was saying a minute ago, I found this one man lying there on the quarter deck in this wreckage, pinned down by a ventilator. With Mr. Blandin's help, we got him up just in time before the water rose over him. The captain and the executive officer ordered the magazines to be closed. We all saw at once that it would be no use flooding the magazines. We saw that the magazines were flooding themselves. Then the captain said he wanted the fire put out that was starting up in the wreckage. I made my way forward through the wreck and débris, up to the middle superstructure, to see if anything could be done toward putting out this fire. When I got there I found nothing could be done because the whole thing was gone.

When I climbed up on this wreck on the superstructure I saw similar piles of wreckage on the port side which I had not seen before, and I saw some men struggling in that, in the water; but there were half a dozen boats there, I suppose, picking them up and hauling them out; and after pulling down some burning swings and things that were starting to burn aft, to stop any fire from catching aft, I came aft again out of the wreckage. There was no living thing up there at that time. Shortly after that we all left the ship. There were two distinct explosions—big ones—and they were followed by a number of smaller explosions, which I took at once to be what they were, I suppose—explosions of separate charges of the blown-up magazine. The instant this first explosion occurred, I knew the ship was gone completely, and the second explosion only assisted her to go a little quicker. She began to go down instantly. The interval between the two was so short that I only had time to turn my head and see the second. She sank on the forward end—went down like a shot. In the short time that I took to run the length of that short superstructure aft the deck canted down, showing that her bow had gone at once.

At the same time the ship heeled over considerably to port, I should say about 10 degrees, the highest amount, and then the stern began to sink very rapidly, too; so rapidly that by the time I got that gig lowered, with the assistance of another man or two, the upper quarter deck was under water, and the stern was sinking so quickly that when I began to pick this man up, whom I spoke of on the quarter deck, the deck was still out of water. Before I got this ventilator off him—it didn't take very long, as Mr. Blandin assisted to move that to get him up—the water was up over my knees, and just catching this fellow's head. The stern was sinking that quickly. The bow had gone down, as I say, instantly. I do not suppose you want my impressions.

By the JUDGE-ADVOCATE:

Q. No; I will ask you some questions. Which was the larger explosion; which gave you the greater shock, the first or the second?

A. The first was more of a feel. I mean, you felt the first explosion rather more than you saw it. I felt the whole ship just go up and tremble and vibrate all over. The first explosion was a duller sound, to me. The second was a kind of an open explosion, you might say,

which was the one that I saw, which came right up at once. The other one had come up, too, but I had not been able to see it.

Q. Was there any lifting of the ship at the time of the first explosion?

A. The ship began to list immediately. The explosions followed each other very quickly. I just had time to turn my head, and the ship began to list to port immediately. There was no appreciable interval of time between these two explosions.

Q. What I mean is, Did the ship give a sudden list to either starboard or port at the first explosion, as if something had struck her on either side? I don't mean a gradual sinking, as she did afterwards.

A. I didn't notice any special list at the first shot, but she began to list immediately.

Q. As I understand from your description, the first explosion was more as if something had run into her, and trembled the whole ship?

A. No; not as if something had run into her at all; as though something had exploded under her.

Q. It affected the whole ship more than the second explosion, which has a bursting of the forward part?

A. Yes, sir.

Q. On which side did you think the explosion was, at the moment?

A. My instantaneous impression was that it was on the starboard side; but that was an impression. It was the starboard side that I saw blow up myself. I couldn't see the port side. I was sitting behind the after turret, and the awning was spread, coming down, and I couldn't see that at all. I felt the explosion was forward, and rather to starboard. I naturally supposed it must have been to starboard, because it was to starboard that I looked.

Q. And could see?

A. And could see.

Q. The turret obstructed the view of the port gangway, did it not?

A. It entirely obstructed the view of the port gangway. I could not see anything at all to port. The turret was there, and the awning was spread, coming down through the top of the turret, so that I could see neither above nor ahead.

Q. The quarter-deck awning was spread, was it?

A. Yes; and my only line of sight forward was in a diagonal starboard line, between the after superstructure and the turret gun, looking out toward the starboard gangway.

Q. Was any water thrown up at the time of either explosion?

A. I didn't see any water thrown up.

Q. Did you feel any?

A. I didn't feel any.

Q. Were there any upshoots of flame in either explosion?

A. The first explosion, I do not know what there was, because I did not see it; but in the second explosion, there was an upshoot of flame, and deck and everything else in sight, along the starboard side. I saw the whole starboard side of the deck, as far as I could see it, nearly as far aft as the after end of the middle superstructure—I saw the whole thing go up in the air, and the part of the superstructure there along with it.

Q. Did you notice any explosions in the air?

A. No.

By the COURT:

Q. You connect that movement of the lifting of the deck of the middle superstructure distinctly with the second explosion, do you?

A. The deck, not the superstructure at all. During this first explo-

sion there was nothing in the way of the starboard gangway of that vast mass of wreckage that is lying there now. My first sight through the starboard side was a perfectly clear sight, and there was nothing lying there, or there was no wreckage there, of that immense pile of wreckage that is piled on the starboard and after side of the ship after the whole thing was over. There was nothing there at that time. There was a clear view through, right past that superstructure, and I just happened to get a look in time to see all that go up itself. When I climbed up after the thing was over, and we got the boats out, and I climbed up in this mass of wreckage at night, I found an immense mass of wreckage piled up where I had seen this thing go up. In the darkness of the night I took that mass of wreckage to be the starboard side of the ship, that had just blown up and tilted up. That was my impression during that night, that this big mass of wreckage was the end of those beams that I discovered the next morning. That night I thought they might be the end of the beams themselves thrown up in the air. When that second explosion took place there was nothing in the line of my sight forward. It was perfectly clear.

By the JUDGE-ADVOCATE:

Q. Where were you at the time of the first explosion? What was exactly your position?

A. I was sitting, I should say, just between—I can point it out exactly on the plan.

Q. We would rather have you tell where you were, because your pointing can not go in the record.

A. I was sitting almost opposite the door, I should say, almost under the forward davit of the whaleboat.

Q. On the port side?

A. On the port side.

By the COURT:

Q. Fix it exactly by the number of the frame?

A. I don't know what the number of the frame is. I was sitting right there, almost opposite this door [indicating].

Q. The door that leads into the admiral's cabin?

A. The door that leads into the admiral's cabin, yes, sir.

Q. The frames are numbered here.

A. (After examination of the plan.) I was sitting about on frame 66, close to the port rail.

By the JUDGE-ADVOCATE:

Q. I understand you to say you jumped right up and ran over to starboard?

A. First, before I jumped out of my chair, I turned. I was sitting in the chair with my feet on the rail. Before I jumped, I turned to the right to look forward, and I had a view just between the turret and the aftersuperstructure, across the deck, over to the starboard gangway. I did not start to run until after the second explosion, when I saw the whole deck and everything above there, and below, too, I suppose, rise up in the air. I saw various missiles of all kinds flying around loose, and some of them were flying toward me. One of them whisked off my cap as it came by. It didn't touch my head, but I felt the wind of it as it went by, and I quickly jumped against the port side of the aftersuperstructure, to be under shelter from these flying missiles.

Q. Your position did not give you a full view of the starboard gangway?

A. No.

Q. The wreck shows now that the forward part of the superstructure was thrown forward of the afterpart?

A. Yes, sir.

Q. Do you think it might have been possible that it was thrown up at the first explosion but not landed in time for you to see the wreckage?

A. That is exactly what I think. It was not there when I saw this second explosion. Just immediately after I got up on the superstructure, the thing was there. My belief is that the whole forward part of the superstructure that is lying there on the starboard gangway now was in the air at the time I saw the second explosion.

Q. You think the first explosion threw up the middle superstructure?

A. I do. The explosion that I saw myself was on the starboard side, and that would have raised and thrown anything in the other direction—thrown it off.

Q. You saw the second explosion on the starboard side?

A. Yes, sir.

Q. But could it not have been on both sides and you not able to see it?

A. It could have been, except that when I examined the wreck the next morning the afterpart of the port side of the middle superstructure was apparently intact. It is intact there yet, almost, and the starboard side aft is all gone. As I say, I saw this deck go up almost as far aft as the after end of the superstructure.

Q. Then it is your belief that the deck was raised at the first explosion?

A. It is my belief that the forward deck—that main deck forward—was raised at the first explosion.

Q. And the second explosion might have been on the port side as well as the starboard, but you would only see the starboard? Is that correct?

A. No; I think the second explosion was more to starboard. The flames and the crater that I saw were to starboard.

Q. None on the port side?

A. I could not see the port side. I do not know what was on the port.

Q. That is what I am trying to say. You could not testify as to the port side?

A. I could not see the port side at all. Of course, I only have my impressions of it after I climbed up on the wreckage and saw what was left—saw what the thing was; but I could not see anything to port. I did see the starboard side go up, and when I saw that starboard side go up my first sight of it was clear. There was nothing piled up there, and it was perfectly clear. Shortly after the explosion, the next time I saw it, there was a great mass of wreckage piled up there, which I saw afterwards was the forward end of the main deck and the middle superstructure. That was not there when this second explosion that I saw took place.

Q. You could not be positive, then, which explosion threw up the forward part of the superstructure, but you are positive that it was not there when you got a view?

A. I am positive it was not there when I saw it, and that the explosion that I saw on the starboard side would have thrown things away from there.

By the COURT:

Q. How do you account, Mr. Hood, for the fact that the missiles

which you saw, some of which were coming your way, followed the second explosion?

A. They were things that had blown up from below in this explosion—parts of the deck and parts of the superstructure, the starboard side of the superstructure, and whatever was in the way there. The thing opened out just like a big crater. It is only a matter of judgment, of course, as to just how far aft that came; but my line of sight did not take so very far forward of the line of the after end of the superstructure from where I was sitting.

Q. It is only a question of separating the impression, or estimating the interval between the first and the second explosion, and whether the first one could have produced a result which you did not see at the time of the second explosion. That is, the wreckage which had been produced by the first explosion only landed in its place after the second explosion?

A. After the second explosion.

Q. Or whether the result of the second explosion was what you subsequently saw and recognized as being the result of either the first explosion or of both explosions, or of only the second explosion. That is, you can not separate the result of the two explosions?

A. No; I could not separate them fully, of course, but I know that my line of sight was perfectly clear when I saw this thing open up.

Q. Until the second explosion occurred?

A. Yes; they followed so closely on each other that of course it is a mere matter of impression as to how close they were together.

Q. Yes; I am aware of that.

A. I turned my head, and before I got my head around I heard the second one, and I just got around in time to see.

Q. You saw that your view at that time was unobstructed.

A. Was unobstructed. Of course it was an instantaneous action on my part—as near as a human action can be to look—around.

Q. Why do you think the second explosion occurred on the starboard side?

A. Because I saw the starboard side of the deck go up in the air, and everything about there going up. As soon as I got on top of the after superstructure, I saw this mass of wreckage, and foam, and things skimming in a semicircle around on the starboard side.

Q. Could you see the port side from the superstructure after you got up there?

A. No; the wreckage and other things were in the way from where I was. I did not see that until a minute or two after that, when I climbed forward on the wreck of the middle superstructure. Then I saw the port side, too. That was the first I had seen of the port side.

Q. Will you tell us what your impression was the following day, or when you had a distinct impression of the wreck, as to the point at which the explosion had taken place.

A. In the morning I went around the wreck when it was not absolutely full daylight. Mr. Wainwright and myself got in a boat and pulled around it, and my impression that morning in this darkness was that——

Q. But you were there how long afterwards?

A. I was not near the wreck at all after that. I watched it through glasses as I was coming out on the steamer, but the steamer did not pass very near the wreck. I was in doubt as to just what that mass of wreckage that is turned up there was at that time. I knew those were beams, and that was a part of the superstructure, but whether that was

the main deck in the after end of the superstructure, turned up in the air, or whether it was the port end of the forward part of the superstructure that was turned up in the air I could not exactly make out. I could not place exactly what that protuberance was that stuck out there on the starboard side.

Q. You know now, do you?

A. I know what it is; yes. I have studied the thing out since, and I know it is the base of the conning tower. I thought that is what it looked like, but I could not see that morning how it could get there. I could not place it. I thought it might have been the starboard side of the deck, aft, blown up in the air, with the starboard ends of the beam sticking up. At the distance I saw it from the steamer I took it that it might have been one of the drying rooms—I think they call them—around the smokestack, or something of that kind; but I saw that the whole ship was gone from the cranes forward.

Q. Bearing in mind the second impression, or the impressions you got the following day of the condition of the wreck, does that accord with the impression made upon you at the time the explosion occurred?

A. Yes, sir; my impression has never changed at all, except in that I was not sure at the first instant just where the explosion took place, whether it was more to starboard or more to port.

Q. Your impression was at first——

A. My impression at first was that it was a little starboard.

Q. That it was on the starboard side, and now, after knowing the position of the wreck, you are still of the same impression, are you?

A. No; I am of the impression that the explosion was on the port side.

Q. Yes; but the second one?

A. The second explosion, I am under the impression, was on the starboard side. It may have been, of course, that the main explosion at first threw a lot of these things out to starboard, but I could not see that.

Q. I would like to ask a question about the agitation of the water. What did you notice about the agitation of the water?

A. I just noticed a semicircular space of water opposite the starboard side. It was just a mass of foam and wreckage. There were quite a lot of groaning men in it. It extended out, I thought at the time, about 75 yards.

Q. Was there any wave?

A. There was no big wave; no. There would not be any wave.

Q. How close to the port side of the magazine was any of the powder stowed—I mean the 6-inch reserve magazine?

A. The 6-inch reserve magazine was well in. Just the exact distance I do not know; but it was well in from the side of the ship. It was on the port side of amidships.

Q. I mean from the coal-bunker bulkhead, which is the outboard bulkhead of the magazine?

A. I do not remember.

Q. You did not notice any smoke or flame rising above the deck until the second explosion occurred?

A. I did not; but I could not see anything on the port side at all.

Q. You did not notice?

A. I did not notice, because I could not see anything, except on the starboard side.

Q. I mean above the deck. I do not refer to either side. You did not notice any smoke or flame rising above the decks until the second explosion occurred?

A. No; I could not see.

By the JUDGE-ADVOCATE:

Q. When did you see the steam launch last, or did you see her at all?

A. I didn't notice her that night at all.

The judge-advocate requested that the testimony given by the witness be not read to him by the stenographer, but that he be directed to report to-morrow morning at 10 o'clock, when he will be furnished with so much of the record as contains his testimony and asked to withdraw for the consideration of the same, upon the completion of which he will be again called before the court and be given an oportunity to amend his testimony as recorded, or pronounce it correct. The request was granted, and the witness was instructed accordingly; whereupon he withdrew, after being cautioned by the president not to discuss matters pertaining to the trial.

Lieut. GEORGE P. BLOW, U. S. Navy, appeared as a witness before the court and was sworn by the president:

Examined by the JUDGE-ADVOCATE:

Q. Please state your name, rank, and to what ship you are attached.

A. George P. Blow, lieutenant, United States Navy, attached to the U. S. battle ship *Maine*.

Q. How long have you been in the *Maine*?

A. I have been in the *Maine* since September, 1895, I think it was.

Q. As what?

A. As lieutenant and watch officer.

Q. What division have you?

A. I had the fourth division first, and later the third division, in charge of the after turret.

Q. When did you last have gunnery drill in the *Maine*?

A. On Monday.

Q. The day previous to the explosion?

A. Yes, sir.

Q. Was all powder that was sent up sent below and properly stowed away?

A. No powder was sent up, sir.

Q. While you were watch officer of the Maine did you ever notice any hostile demonstrations afloat, in the way of boats attempting to approach the vessel at night that had to be warned off?

A. No, sir; nothing hostile. I have noticed a number of shore boats which were warned off by the sentries; but nothing of a hostile nature.

Q. Do you know the direction in which the *Maine* was heading at the time of the explosion?

A. I know the direction, approximately.

Q. Was that an unusual heading, from your experience during your stay in that harbor, for that ship?

A. Rather unusual; yes, sir. As a rule, we swung so that the *Alfonso*, which was lying at the buoy inside of us, was either on our port quarter or starboard quarter. That was the customary heading.

Q. Were you officer of the deck from 4 to 8 p. m. the night of this explosion?

A. I was the officer of the day—officer on day's duty.

Q. Were you on duty when the reports at 8 p. m. were made?

A. Yes, sir.

Q. Who made them?

A. Do you mean the regular reports to the executive officer?

Q. Yes.

A. The usual reports were made at the mast by the warrant officers, and by petty officers in charge of their departments.

Q. What reports were made to the officer of the deck in your presence or hearing?

A. The reports were made that the captain, the executive officer, and other officers were on board.

Q. I refer to the master at arms' reports about lights and fires.

A. The usual report was made and repeated by Mr. Cluverius, before the deck was delivered over to the orderly, that the lights and fires were secure and everything was secure.

Q. You were officer of the day of the *Maine* on February 15 up to 8 p. m., and you consider that everything was secure below on the ship at 8 p. m.?

A. To the best of my knowledge, everything was secure as usual.

Q. Did you, as an officer who had been on the ship for a long while, have perfect confidence in the reports of these men that everything below was secure?

A. Yes, sir.

Q. Where were you at the time of the explosion?

A. I was in my room, writing.

Q. Where is your room situated?

A. My room is the after room on the starboard side, in the wardroom proper, just forward of the bulkhead separating it from the after compartment.

Q. Do you remember the number of that bulkhead?

A. No, sir. (After looking at the plan.) It was just abaft of frame No. 76 on the starboard side.

Q. Will you state to the court what you experienced during that explosion? We wish to know what you felt, what you heard, or what you saw.

A. I was writing at the time, and heard forward, and apparently at some distance—that is to say, well up in the bow, as far as I could judge from the sound—an explosion.

Instantly the lights went out. I rushed out of my room to see the cause of it, and before I could get more than probably 6 feet from my room a second and much more violent explosion followed. This explosion I would describe as being a continuous explosion, lasting for some seconds, and accompanied by the falling of lights, electric fittings, furniture, and by a crashing and rending of metal, and immediately by a sharp heel of the ship to port; the sound of rushing water from forward, and the cries and screams of men from about amidships. My first impression was that we had been fired on, and I remember feeling surprised that it should have been by such a heavy gun. When the second explosion occurred, followed by the listing of the ship, I recognized the fact that the ship was sinking, and had been blown up.

My impulse had been at first to go to my quarters, but at the second explosion I abandoned all thought of this, and realized that it was a question of whether I could reach the deck or not before the ship sank. A sharp heel of the ship, as I rushed forward feeling my way along the starboard bulkhead, caused me to lose my way amidst the wreckage, and for probably a moment I was confused as to my position. I soon found the bulkhead again, and, feeling my way along, reached a small china jar on top of the starboard *steam heater*, and recognizing

this by feeling, found the starboard door leading forward. This door was closed and jammed. It could not be opened. I then felt my way across the deck to the port door. The list of the ship, which had probably closed the starboard door, had kept the port door open, and I had no difficulty in finding it. Stepping through the door, I reached the ladder, and ran into someone in the dark.

By the COURT:

Q. What ladder was that? The one just outside the bulkhead?

A. Yes, sir; just outside the bulkhead, leading up to the wardroom proper.

By the JUDGE-ADVOCATE:

Q. It leads into the cabin passage?

A. Yes, sir. We both fell, owing to the inclination of the deck, but, helping each other up again, we immediately crawled up the ladder, which was then nearly vertical. I am under the impression that this ladder fell immediately afterwards, as I heard a crash behind us. The water was then rushing in on the berth deck, though it was not quite up to the ladder, as she was heeled to port. Reaching the main deck, I felt my way through the starboard door in the after superstructure out on deck, and was surprised to find that everything was pitch dark, as dark as it had been below.

By the COURT:

Q. That starboard door opens right out on the starboard deck?

A. It opens right out on the starboard deck; yes, sir.

Q. After passing through that you found it dark?

A. I found it perfectly dark there. I was surprised at the time to find it so dark. This was probably due to the fact that the quarter-deck awning had been dragged down by the fall of the third cutter. As I passed through the door I ran against someone hanging from the poop-deck rail, who asked me to give him a push up on deck. This I did, and believing that there must be some good cause for his having taken that way of reaching safety, I quickly followed. At this time the main deck was still above water. On reaching the poop deck I glanced forward and found the whole forward part of the ship a mass of confused wreckage, and apparently submerged up to and above the main deck. There were about a dozen men only to be seen on the poop deck. Among these I recognized the captain and the executive officer, Lieutenant-Commander Wainright, who were giving orders to get out the boats for the purpose of saving the lives of the men in the water.

On the starboard side the beam and forward there were cries for help. Realizing at a glance that my boat, the third cutter, and that all the boats, in fact, forward, were gone, I turned aft to help to get out the only boats remaining. I found the gig manned and about to be lowered. I lowered the forward fall, and was surprised to find that the boat only went down about 6 or 8 feet. Thinking the stopper might have passed, or the blocks jammed, I asked the man in the bow if everything was all right. He replied yes. I asked him why the boat would not go down. He informed me that the boat was afloat. By that time the water had nearly reached the top of the superstructure deck. I then went forward again, and noticed that the wreckage had broken into flames, and I heard someone, I think the executive officer, say to the captain: "There is the wreck of the fire ship which

have sent down on us," pointing to the wreckage forward, which now illuminated from the burning cellulose.

:hen went to the port side to assist in lowering the barge. I found she had already been lowered and was afloat. Before that, how-, I would like to insert something. I am a little too fast. Before g forward again one of the midshipmen—I think it was Mr. Clu-ıs—came and asked me if he could be of any service. I told him mp in the gig and take charge and save what life he could on the ɔoard side, which I believe he did. After this I went to the port to assist in lowering the barge and I found that she was already ıe water and afloat. There were already, I think, four men in her, ever, to man her. So I went back again and called several who › standing on the poop and put them in the boat, and afterwards in myself. I took charge of the boat, ordering the man at the helm :eer around on the starboard side, where most of the cries for help been heard. After shoving off I found Lieutenant Jungen was in boat, and he being my senior I turned the boat over to him and ıested that he put me back. He said it was impossible, which was ectly right. He pulled completely around the ship, and only suc-led in picking up one man on the starboard side, as we became ılved in the wreckage and débris which was floating from a beam ınd the bow. The barge being very long, and only half manned, very difficult to maneuver. We were continually backing and ing out.

ı that way we did not get around as quickly as we might have done. this time the wreckage was all in flames, and I called Mr. Jungen's ıntion to the fact that I thought I saw men on the forecastle, as I posed it to be, and asked him to pull in there and see if he could get them off. We headed in for the wreckage, but ran into other ckage, which we found out there to be the submerged portion of the ɔcastle and forward superstructure. We backed out and again led in toward the flames. We then found that it was the after part the middle superstructure, abreast of the port crane. There were eral boats there, which had already taken off all the men, so we led around on the port quarter, and again reported to the captain t the boat was there ready to take off anybody else. In the mean-ile, the captain had ordered the ship to be abandoned. Mr. Wain-ght asked us if we were all right. We told him yes, and asked the tain if he would not get in the barge. He replied, "No; I want my ı boat," and then ordered all of our boats to go on board of the Ward e steamer the *City of Washington*. He then put his orderly and ryone else into the gig and got into the gig himself. We obeyed ers and went aboard the *City of Washington*. Do you wish me to any further?

By the JUDGE-ADVOCATE:

ı. No. Will you please describe your sensation of the first shock a le more fully?

. The first shock was not a very severe one, although it was suffi-ıt to put all of the lights out. It impressed me as sounding, as rly as I can recollect, like a 10-inch gun fired close aboard. My ɔllection is that I was surprised that they should fire on us with such ge guns so close aboard.

ı. I suppose you had heard no report in connection with this—what ıld you have supposed? What was the shock like?

. It was a dull concussion; not like the shock of a rapid-firing gun

or a 6 inch gun. It was longer and deeper in tone, and also with more of a shake.

Q. Did this first explosion, or whatever it was, list the ship any?

A. I think not.

Q. By the time you had reached the deck in the method you have described, had the second explosion finished completely?

A. Yes, sir.

Q. Then by the time you reached the deck there was no more upshoot of flame or débris or anything?

A. Only a few cinders and sparks.

By the COURT:

Q. When you got up on the poop deck, did you notice whether the men who had been thrown into the water were all on one side of the ship or not?

A. My impression was that those in the water were all on the starboard side; but I was on the starboard side myself, and it is possible that there may have been men on the port side whom I did not hear. That was my impression, and I ordered the boat to pull to the starboard side to pick up the men rather than the port side.

Q. How did you reach the starboard side?

A. We pulled around the stern, sir. The stern was cleared of wreckage and débris. We had no difficulty around the stern.

Q. Yet the ship, you say, was listed sharply to port at this time?

A. To port at this time. She had straightened up more, which led me to believe that she was on bottom.

Q. But she was listed?

A. Yes, sir; she was still listed; not so much, I think, as when she was sinking.

Q. From where you were could you tell from the shock, etc., about where the explosion occurred?

A. Only that the explosion seemed to me to come from well forward.

Q. Could you tell from which side it came from?

A. No, sir. I had an impression, but I do not think it is strong enough. My impression was at the time—that is to say, my impression now is—that it came from port, if there is any distinction; but I do not think it was strong enough at the time to notice—simply that it was an explosion from forward.

The judge-advocate requested that the testimony given by the witness be not read to him by the stenographer, but that he be directed to report to-morrow morning at 10 o'clock, when he will be furnished with so much of the record as contains his testimony and asked to withdraw for the consideration of the same, upon the completion of which he will be again called before the court and be given an opportunity to amend his testimony as recorded, or pronounce it correct. The request was granted, and the witness was instructed accordingly; whereupon he withdrew, after being cautioned by the president not to discuss matters pertaining to the inquiry.

Lieut. CARL W. JUNGEN, U. S. Navy, appeared as a witness before the court, and was duly sworn by the president:

Examined by the JUDGE-ADVOCATE:

Q. Please state your name, rank, and to what ship you are attached.

A. Carl W. Jungen, lieutenant, United States Navy, attached to the U. S. S. *Maine*.

Q. How long have you been aboard the *Maine?*
A. Nearly two years and a half, sir.
Q. Ever since her commission?
A. Ever since her commission. I went into commission with her.
Q. What have been your duties since that time?
A. Watch and division officer, sir.
Q. What division did you have at the time of her destruction?
A. I had command of the second division, the forward turret.
Q. How long had you had that division?
A. About a year and a half, sir.
Q. When did you last have gunnery drill on board the *Maine?*
A. On the Thursday previous to the accident. I don't remember the e—general quarters.
Q. Did you not have gunnery drill the day before, on Monday?
A. Yes, sir; we did.
Q. After that drill, was all powder that was gotten up properly sent ow and stowed away?
A. We didn't get up any powder at all at that drill.
Q. Then there was no powder outside the magazines, as far as you w, subsequent to the last time it was gotten up?
A. No, sir.
Q. It was all properly stowed in the magazine?
A. All properly stowed away. That is, I have not charge of the wing away, but there was none gotten up.
Q. Was there anything kept in the loading or passing rooms which uld not be there?
A. No, sir; nothing that should not be there, although there was an ra supply of 10-inch shell ready for immediate use, which had been tten up on the night that we started over for Havana from Tortugas.
Q. Who was the gunner's mate of your division?
A. Rieger. I don't remember his first name.
Q. He was a reliable man?
A. Yes, sir; he was.
Q. Do you know a seaman by the name of Neilson, who used to be on steam launch of the *Maine?*
A. I do, sir.
Q. What duties was he performing just lately before the explosion?
A. I don't know, sir, that he was performing any special duties other an those of seaman in the forecastle, where he belonged.
Q. What was the man's record and character?
A. Excellent, sir.
Q. Was he a very reliable man?
A. I should say he was.
Q. At the time of the explosion he was in Lieutenant Jenkins's divi- n, was he not?
A. Yes, in the first division.
Q. And the regular captain of the hold, was he in the ship?
A. No, sir; the regular captain of the hold was sent to the marine spital some days before we left Key West, on or about the 20th of nuary.
Q. I have reason to believe, and I shall prove before the court that s seaman, Neilson, was acting captain of the hold at the time of the plosion. I therefore ask you his character. It was thoroughly iable?
A. I consider him so, sir.
Q. While officer of the deck of the *Maine*, in the harbor of Havana,

did you ever notice any hostile demonstration afloat, in the way of boats attempting to approach the ship, that had to be warned off?

A. No, sir; I never did.

Q. From your knowledge of the swinging of the ship, do you think that at the time of her explosion she was swinging in an unusual direction?

A. I could not tell that positively without referring to the log-book, but I think not.

Q. Were you below at the time of the explosion?

A. I was, sir.

Q. Where?

A. I was sitting in the mess room, the after part, at the small table. Assuming that the ship was heading north, I was sitting at the southwest corner of that table, talking to Mr. Jenkins and Mr. Holman. Mr. Holman was sitting at nearly the opposite corner, and Mr. Jenkins, I think, was standing at the time.

Q. Will you please describe to the court your experiences of this explosion, all you saw, heard, and felt up to the time that the whole thing was over?

A. I had just arisen from my seat. I had finished smoking a cigar which I had in a cigar holder. I had flicked the cigar out of it, and a piece of the wrapper was adhering to the inside, which I pulled out. As I pulled that out the explosion occurred. I remember that distinctly. It was not an explosion. It was a dull, deafening roar, followed immediately by a tremendous crash, and it seemed as though the whole ship was falling to pieces. Mr. Holman jumped up and remarked, "We have been torpedoed," which was the general impression we all had. He added: "Follow me."

There was a sufficient interval between the time it took me to get from that end of the table to the door opposite in the mess room before the lights were extinguished, so that I saw what appeared to me a thick dust or ashes or brown smoke. It may have been the dust that was shaken up from the ship. I detected no odor, nor did I experience any discomfort from it in passing through it. This lasted long enough—that is, the interval of time was sufficiently long—for me to reach the door and see that. I believed at the time that Mr. Jenkins and Mr. Holman were—I know Mr. Holman was and I believe Mr. Jenkins was—right ahead of me. Total darkness followed, and I saw no one then. I stretched out my hands. I knew where I was, but I was afraid of missing my way. So I stretched out my hands to catch hold of the engine-room hatch, which was right there. I followed along that with my other hand and reached the ladder. I got up the ladder and in the passageway of the after superstructure. I thought I saw the captain's orderly there, though I am not sure it was he. I ran out through that passageway and turned to the left, with the intention of going forward. As I was coming up the ladder I heard three—I think it was three—distinct explosions. One of them was more powerful than the other two. The other two were of a character that at the moment impressed me as being the fire of a 6 or 8 inch gun, and the thought flashed through my mind that we were being fired on, after being torpedoed, by the Spanish cruiser that was lying within 200 yards of us at her usual buoy, where she had been ever since we had been in the

Q. The *Alfonso Doce?*

A. Yes, sir. As I turned to the left, I encountered a mass of wreck and débris which had fallen on top of the awning. The awning had been spread, so that I could not get forward. I intended at the

to my station at general quarters. Then I made an effort to get to
ıdder, and I could not—the ladder that leads up the poop. Find-
hat I could not get on the poop that way, I turned around and
ht hold of the iron water-tight door on that superstructure—the
that I had passed through—and tried to raise myself on it. I
l the first time, and then, by a superhuman effort, I swung myself
I got my foot up on the waterway, and then I let go one hand and
bed where I knew there ought to be a rail. It was a chain that
been replaced by a rail. I caught hold of that and swung myself
The captain and the executive officer were on deck at the time.
had gotten there in the meanwhile, and I heard the captain give
order about flooding the magazines.
r. Wainwright made the remark, "There is no use flooding the mag-
es; the ship is sinking." I, myself, then realized that the ship was
ing. Then the captain gave the order to lower the boats. There
very few people on the poop that I could see. I groped my way aft,
the skylights and the wreckage that was there, to the barge. I
d Mr. Morris at the forward boat. I recognized him and Mr. Catlin
he after boat. I directed Mr. Catlin to get into the boat and see
the plug was in it. I could not see then. There was a dark shadow,
ppose, which was cast on the water by the light forward, and I
d not see how high the water was up on the ship's side. He said
rst he could not find the plug. I told him to throw the grating over-
rd and see if he could not get at it. Finally he got it, and I reported
the boat was ready for lowering. Without waiting for further
ers I lowered the boat. I lowered it about 8 feet, I suppose, when I
g out to Mr. Catlin to let me know when the boat was in the water.
said she was in the water then. Then the sentry on the poop, who
l loaded his rifle when the explosion took place—he had orders in a
lden emergency to load his rifle, which he did—got in the boat.
There were two men—I don't remember who they were; I think one
them was a mess attendant and a man by the name of Rush—who I
rected to get in the boat. Then I got in the boat myself to go around
d help pick up the men who were in the water. There was a great
eal of hallooing and screaming for help. As I was about to shove
ff, only having four people in the boat, Mr. Morris got in. The pay-
naster and the chaplain, and Mr. Blow, and another man appeared at
the rail, and I told them to get in. It was the barge—a large boat.
They got in and they all took oars, and I took the boat and pulled
around. I had to pull around clear of all the wreckage that had
fallen in the water, which was very thick, like the driftwood you see
sometimes in the Mississippi River. You could not pull through it.
You had to pull around it. We pulled around on the starboard side. I
saw no one aft, but I picked up a man opposite the forward turret.
Then I went around the bows of the ship, or what has since transpired
were the bows, but which we took at the time to be the wreck of a fire-
ship, because I heard someone remark while I was on the poop that
there was a fire ship down on us. I worked my way aft on the star-
board side again to the quarter, and the ship by that time was, as near
as I could make out, sunk until the upper superstructure was flush
with the water.

There were several boats standing by to take the captain and execu-
tive officer, who were the last people to leave, as I remember. I offered
the captain my boat and he said he wanted to go in his own. Other
officers offered their boats. When I got around on the starboad side,
I found several boats there, two Spanish boats, and two boats which I

took to be merchant boats, and some smaller boats from shore. Besides our two boats, I believe, and the second whaleboat, which had been lowered, they all had survivors, people they had picked up. When I got around to the quarter again, the captain gave the order, before he got in his boat, for all the boats to go alongside the Ward Line steamer. I shoved off then with the people I had in the boat and went alongside. I put this man on board, and just then it began to rain quite hard. It rained harder a little later, for about ten or fifteen minutes, I should say. Then I got all the officers and the wounded man out. I directed them to go ahead, as the other boats were coming alongside. Then I went down into the cabin, and my first thought was to see if Doctor Henneberger was there. I found him attending the wounded. Mr. Blow went down to assist him. That is all that I can think of.

Q. In the first part of your evidence you spoke of an interval several times. What interval do you refer to?

A. It seemed to me an appreciable interval between the roar and the crash and the extinguishment of the lights, which was, as I say, sufficiently long to enable me to travel from that end of the table to the door, which was probably 8 feet, but the way I went around the table it was probably a longer distance.

Q. Did you not testify to two shocks, two explosions?

A. I testified to the original roar and crash, and then, as I remember, three distinct explosions, one of them being more violent than the rest of them. The other two that I speak of reminded me of the firing of a 6 or 8 inch gun.

Q. Will you describe a little more distinctly the three different explosions; how they took place and the interval between them?

A. I can not give you a proper conception of the time.

Q. You have not stated yet whether the big explosion was the first or the second or the third, and you have not stated definitely at which time the lights went out. Which explosion came first; the small one?

A. The first explosion, as I said, was a dull, deafening roar, followed immediately by a crash. By the time I got to the door, I should say, the lights all went out. Then there was another explosion, which was more violent than any explosion I had heard, that I could not liken to anything except possibly the explosion of a magazine.

Q. When did the lights go out in reference to this second explosion?

A. About simultaneously.

Q. Then you think the dynamo may have been destroyed at the second explosion.

A. Yes, sir.

Q. And not by the first?

A. Not by the first.

Q. Was there any perceptible list or lifting of the ship at the first explosion?

A. I did not notice that.

Q. Did you locate in your own mind this first explosion?

A. Yes, sir; I located it on the starboard side, as I supposed.

Q. Forward or aft?

A. Starboard forward, and as I supposed about under the forward turret.

Q. That was your impression?

A. That was my impression.

Q. And the second one; where did you locate that?

A. Forward; but I could not tell whether it was a magazine or whether it was a second explosion similar to the first.

By the time you reached the deck the explosions had finished?
The explosion had finished; yes, sir.
As to the boats in the water; were there more on one side than e other, and which side?
I couldn't tell you that, sir; because when I went around to the of the ship I only saw one man in the water on the starboard

You went around on the port side from starboard?
I went around; yes, sir.
Why did you not go right out to port?
Because I thought the explosion was on the starboard side.
You heard the hallooing more on the starboard side?
I didn't hear any hallooing at first. My attention was called to 'he men were yelling, and it appeared to me to come from the side of the ship.

ly the COURT:

When did you first notice the list of the ship?
I didn't notice that until I caught hold of the door to go up on ıperstructure. Then I noticed that the ship listed.
After you had been up through——
Up over the ladder and through this passageway to turn to go ırd.
Which ladder did you go up from the berth deck to the main deck?
The ladder that is usually designated as the wardroom ladder.
Which one is that?
That goes up from forward of the water-tight bulkhead separat- ıe wardroom proper from the after torpedo room.
That is not quite the answer I want. Was it the starboard lad- Did it land you on the starboard side of the main deck or the side?
It landed me on the starboard side of the main deck.
So you did not notice that that ladder was unusually steep?
No, sir; I did not.
You did not notice whether it was or not?
No, sir.
Are there two ladders there?
There are two ladders there, alongside of each other. It is really ıe ladder. There is a crossbar from the hatch to the grating.
The ladders lead the same way?
Yes, sir; the ladders lead from port to starboard.
To make it perfectly clear, between these two heavy explosions ıad time after the first explosion to turn around and go about et?
Yes, sir; so it appeared to me.
The other explosions to which you refer were smaller ones?
Smaller; yes, sir.
And occurred some time after?
They occurred while I was going up the ladder and before I got e superstructure door.
But the fact that there were at first two explosions made a dis- ; impression upon your mind?
Yes, sir.
Which would you designate as the more severe explosion, the first or the second one?
The first one; because the crash and everything came with that,

and the second one sounded as though it were an explosion with being attended with the same effects. Where I was at the time, a found out afterwards, toward that part of the ship the smokestacks l fallen—and I suppose they made as much crash as anything—one one side and one on the other.

By the JUDGE-ADVOCATE:

Q. I want to ask you about two more men in the ship, as you h been in her since her commission. Sailmaker's Mate Roos—is he board ship a reliable man?

A. In his duties he is a very reliable man. He was sometimes gi to insobriety when he went on liberty, but I never noticed anything board ship.

Q. I believe he was one of the two men who made the 8 p. m. repo to the executive officer?

A. Yes, sir.

Q. How do you consider Master-at-Arms White as to reliability?

A. He seemed to be a very reliable man—very attentive to his dut

The judge advocate requested that the testimony given by the w ness be not read to him by the stenographer, but that he be directed report to-morrow morning at 10 o'clock, when he will be furnished w so much of the record as contains his testimony and asked to withdr for the consideration of the same, upon the completion of which he w be again called before the court and be given an opportunity to ame his testimony as recorded or pronounce it correct. The request w granted, and the witness was instructed accordingly; whereupon withdrew, after being cautioned by the president not to discuss matt pertaining to the inquiry.

Naval Cadet AMON BRONSON, Jr., U. S. Navy, appeared as a witn before the court, and was sworn by the president.

Examined by the JUDGE-ADVOCATE:

Q. State your name, rank, and to what ship you are attached?

A. Amon Bronson, jr., naval cadet, attached to the U. S. S. *Maine*.

Q. How long have you been attached to the *Maine*?

A. Since May 17, 1897.

Q. What duties have you performed during that time?

A. I have performed boat duty, deck duty—that is, supervision as t commissioned officer of the deck—and mate of the deck.

Q. Mate of the upper deck?

A. Mate of the upper deck and mate of the main deck.

Q. What division were you in last?

A. The second division, all the time I was on the ship.

Q. That is the forward turret division?

A. The forward turret division.

Q. At all times when gunnery occurred in that division, has powd always been sent below properly after the exercise?

A. Yes, sir.

Q. Where were you at the time of the explosion of the *Maine*?

A. I was lying in my bunk in my room.

Q. Which room is that?

A. The forward room of the steerage.

Q. Please describe what you heard and felt and saw.

A. My first impression was that a salute was being fired. That w before the crash came. That is the impression which I have now. Th

was the first thought that entered my mind. Then my bunk was lifted beneath me, and the ship listed over to port. The lights were out, and I heard the water rushing outside in the passageway. I could hear the cries of the men in the marines' compartment. For a very small amount of time I listened to these cries.

Q. When you thought there was a salute being fired, did you feel a shock of the ship?

A. Yes, sir; that was just merely the first idea that flashed through my mind. I felt a tremendous shock.

Q. How long after that shock did you feel the explosion?

A. I can not state, sir.

Q. Was there a distinct interval?

A. I am not prepared to state, sir.

Q. Was there a list of the ship at the first explosion?

A. Almost simultaneously with the explosion.

Q. There was a list?

A. Yes, sir.

Q. Which way?

A. To port.

Q. The ship settled to port?

A. Yes, sir.

Q. But she never was lifted up?

A. I was lying in my bunk, and I felt the bunk lifted beneath me.

Q. That was at the first shock?

A. The first shock; yes, sir.

Q. Everything was over by the time you reached the deck in the way of explosions and small shots?

A. I heard no small shots until about half an hour afterwards, when I heard the small-arm ammunition going off. I heard no small shot. The explosion did not sound loud in the steerage at all.

By the COURT:

Q. You are only conscious of one shock?

The JUDGE-ADVOCATE. He says he is not prepared to say. He says there was a shock and an explosion, but he is not prepared to state there was a distinct interval.

By the JUDGE-ADVOCATE:

Q. Were you asleep at the time?

A. No, sir; I was reading.

Q. In your bunk?

A. In my bunk.

Q. Upper bunk?

A. Lower bunk.

By the COURT:

Q. You say you do not remember; you did not say that either, but you say you did not separate the explosion into two parts?

A. No, sir; I simply know that the first idea that flashed across my mind was——

Q. We do not care about that. You are convinced yourself that that was not correct; that there was no salute being fired?

A. Yes, sir.

Q. You are convinced that that is not so?

A. Yes, sir.

Q. And you were convinced immediately of that, were you not?

A. Yes, sir.

Q. When you felt the bunk being lifted?
A. Yes, sir.
Q. And from what followed, you knew that it was not a salute?
A. Yes, sir.
Q. Do you or do you not remember that there were two parts to that
A. I do not remember.

The judge-advocate requested that the testimony given by the wit ness be not read to him by the stenographer, but that he be directed t report to-morrow morning at 10 o'clock, when he will be furnished wit so much of the record as contains his testimony and asked to withdra for the consideration of the same, upon the completion of which he wi be again called before the court and be given an opportunity to amen his testimony as recorded, or pronounce it correct. The request wa granted, and the witness was instructed accordingly; whereupon h withdrew, after being cautioned by the president not to discuss matter pertaining to the inquiry.

Naval Cadet D. F. BOYD, Jr., U. S. Navy, appeared as a witnes before the court, and was sworn by the president.

Examined by the JUDGE-ADVOCATE:

Q. Please state your name, rank, and to what ship you are attached
A. David F. Boyd, jr.; naval cadet, U. S. Navy; attached to an serving on board the U. S. S. *Maine*.
Q. How long have you been attached to the *Maine*?
A. Since the 19th of June, 1897.
Q. What duties have you performed in that time?
A. The duties of junior officer of division, junior watch officer, an mate of the deck.
Q. What deck have you been mate of?
A. Mate of the berth deck and mate of the superstructure deck.
Q. How long were you mate of the berth deck?
A. From the latter part of August until the 1st of January.
Q. Who relieved you then?
A. Naval Cadet W. T. Cluverius.
Q. What are your duties as mate of the berth deck?
A. To see that all compartments are not open, except those author ized to be open, and to see that those compartments are water-tight.
Q. Which compartments are authorized to be kept open by the rule of the ship?
A. The clothing issuing room, the dynamo room, the forward an after 10-inch handling room, and the passage between the steerage an wardroom.
Q. What do you mean by keeping the forward 10-inch handling roon open?
A. It necessarily must be kept open, because there is a track run ning in to the base of the turret. The compartment can not be water tight.
Q. That compartment is open below deck?
A. Yes, sir.
Q. It does not open on the berth deck at all?
A. No, sir.
Q. But the after 10-inch handling room does open on the berth deck?
A. Yes, sir.
Q. On account of there being more heat there?
A. Yes, sir; it is over the evaporating room.

Q. Everything else is locked up at night, and reported so at 8 o'clock?

A. Yes, sir.

Q. Who are the men who make these reports?

A. The captain of the hold, the equipment yeoman, and the sail-maker's mate.

Q. Are they reliable men on board ship?

A. So far as I know; yes, sir.

Q. Did you yourself see these compartments closed at night, as a rule?

A. Yes, sir.

Q. Did you always find the duty properly executed by the men doing it?

A. I did.

Q. The regular captain of the hold, I believe, was sick at the time of the explosion. Do you know anything about the acting captain of the hold?

A. I do not.

Q. What division were you in last?

A. The third division.

Q. That is the after-turret division?

A. Yes, sir.

Q. Where were you at the time of the explosion?

A. I was in the steerage messroom—the junior officers' messroom.

Q. Please state what you saw, heard, and felt.

A. I was sitting in the steerage reading at the time. The lights went out. A crashing booming was heard. I was struck in the back of the head with a splinter, and remember no more of the explosion.

Q. Were you made senseless?

A. Yes, sir; so far as I know. I have an indistinct memory at the time.

Q. You rushed up on deck, you say, and were struck in the head there?

A. No, sir; I was in the steerage.

Q. Do you remember how many shocks you felt?

A. It was one continuous shock.

Q. One continuous shock was all you felt?

A. All I felt.

Q. You do not know how you got on deck?

A. Yes, sir; I remember perfectly.

Q. Did you feel any list of the ship or any lift of the ship?

A. Yes, sir.

Q. Describe it a little more fully, please.

A. When I collected my wits I grasped Assistant Engineer Merritt by the hand and told him to go up on deck. I pulled him out in the passage in the after torpedo room. We groped along the bulkhead until we came to the turn going over to the port side. At this moment the ship sank down amidships and heeled over on the port side. The rush of water swept us apart. I grasped the steam pipe overhead—the small steam-heater pipe—and worked my way down toward the steerage ladder, but it was gone. I worked my way over to the port side—on this steam heater pipe—hoping to escape through some hole on the port side. The water was rushing through the air ports, so that I was not able to hang onto this small pipe. I grasped the torpedoes that were triced up under the deck beam, and, twining both arms and legs around it, I worked my way inboard toward the hatch, feeling the deck most of the time *to find the hatch.* The water at this time

was almost over my head; almost up to the deck. Some burning cellulose flared up on deck, and I saw the hatch and made for it. I escaped through a mass of débris, on the hatch part of which was the second cutter.

Q. Again referring to the shocks, what kind of a shock did you first feel?

A. As well as I can describe, the shock was more that of a large freight train being coupled up together.

Q. That was the first shock?

A. That was the first shock.

Q. The other was continuous, so far as you can remember, you say?

A. Yes, sir.

Q. A continual roar?

A. Yes, sir; and splinters and glass falling in the steerage.

Q. Was there any list to the ship?

A. Not until we got in the passage.

Q. Then she listed which way?

A. She listed to port.

Q. Was there any lifting of the ship?

A. She sank amidships.

Q. Was there any lifting of the ship?

A. No, sir; none that I remember.

By the COURT:

Q. You speak of being knocked senseless by a splinter. What kind of a splinter?

A. I think it must have been wooden.

Q. Where did the wood come from? The thing in my mind is, if you were knocked senseless with a splinter, how could you state that it was by a splinter?

A. I was struck on the back of the head. That is all I know.

Q. By something?

A. By something. There was a wooden bulkhead at the forward bulkhead of the steerage. I suppose it was wood from that.

Q. Did you, as mate of the deck, have anything to do with the care of the decks below the berth deck?

A. I did.

Q. How far down did your duties extend?

A. My duties extended to every compartment below the berth deck except the engine room and fire room and the engineer's storeroom.

Q. How did you get from the platform deck down to the hold or level of the magazines?

A. How could you get from the berth deck down to the hold?

Q. Yes; from the platform deck?

A. The fore hold?

Q. Yes; the fore hold.

A. There is a hatch in forward compartment A101. You go down two flights of ladders. The first is in the passage between the rooms. The second goes down to the fore hold itself. A101 is a berth-deck compartment.

Q. How did you get down to the magazines?

A. From the 10-inch magazine hatch in the loading room for the 10-inch turret.

The judge-advocate requested that the testimony given by the witness be not read to him by the stenographer, but that he be directed to

report to-morrow morning at 10 o'clock, when he will be furnished with so much of the record as contains his testimony and asked to withdraw for the consideration of the same, upon the completion of which he will be again called before the court and be given an opportunity to amend his testimony as recorded, or pronounce it correct. The request was granted, and the witness was instructed accordingly. Whereupon he withdrew, after being cautioned by the president not to discuss matters pertaining to the inquiry.

The court then (at 1 o'clock p. m.) took a recess until 2 o'clock p. m.

The court reassembled at the expiration of the recess.

Present: All the members of the court, the judge-advocate, and the stenographer.

Lieut. GEORGE F. W. HOLMAN, U. S. Navy, a witness heretofore examined, was recalled as a witness before the court, and after being cautioned by the president of the court that the oath previously taken by him was still binding, testified as follows:

Examined by the JUDGE-ADVOCATE:

Q. Mr. Holman, on June 30, 1897, the commanding officer of the *Maine*, Captain Sigsbee, made out a report, giving the amount of ammunition in each magazine and shell room. I hold a copy of that report in my hand. Will you look at it and tell us whether it is a report made out from data furnished by you? (Exhibit G shown to the witness.)

A. I have no doubt it is. I can not recognize it from anything except the official letter transmitting it.

Q. You did assist your commanding officer in making up such a report?

A. I did; yes.

Q. Can you state what material changes have been made in the stowage since that report was made?

A. No material changes.

Q. Then you think it is a practically correct report at the time of the explosion?

A. I do.

Q. Will you please state where rockets and blue lights and such things were stowed on board the *Maine*?

A. In the chart house or the pilot house, upon the bridge.

Q. All of them?

A. All of them, I think. I do not know of any having been moved from there. They were stowed there originally, and I know of no move having been made.

By the COURT:

Q. Were you asked in your testimony before how many explosions you heard?

A. I heard and felt two, one a small one, a grumble I may call it, and then, after a very short interval, probably a fraction of a second, came the heavy, loud, booming explosion.

There being no further questions to ask this witness, his testimony was read over to him by the stenographer and by him pronounced correct.

The witness then withdrew, after being cautioned by the president not to converse about matters pertaining to the inquiry.

Lieut. A. W. CATLIN, U. S. Marine Corps, appeared as a witness before the court and was duly sworn by the president.

Examined by the JUDGE-ADVOCATE:

Q. Please state your name, rank, and to what ship you are attached.

A. A. W. Catlin, first lieutenant U. S. Marine Corps, attached to the U. S. S. *Maine.*

Q. How long have you been attached to the *Maine?*

A. Since the 1st of August.

Q. In charge of the marine guard of that ship?

A. In charge of the marine guard; yes, sir.

Q. August of last year?

A. August of last year, 1897; yes, sir.

Q. What special orders were given the marine guard of your ship during her last stay in Havana Harbor in the way of special precautions?

A. When we first went into the harbor, there were two extra sentinels put on, one on the forecastle and one on the poop, armed with rifles. They had special orders to challenge all boats which approached the ship near enough for a challenge, and in case any boat came toward the ship, evidently coming to the ship, to report immediately to the corporal of the guard, by the sentinel, and to the officer of the deck. These sentinels were on from 7 o'clock at night until daylight.

Q. Where was the corporal of the guard stationed?

A. The corporal of the guard was stationed in the starboard gangway.

Q. Was there an extra man in the port gangway?

A. There was a patrol in the port gangway.

Q. What do you mean by a patrol?

A. He went by the name of patrol, because his beat went up in the forward superstructure, as well as in the port gangway.

Q. He was a picked man?

A. Yes, sir.

Q. Acting as corporal?

A. He was an acting corporal; yes, sir.

Q. Doing a corporal's duties?

A. Yes, sir.

Q. What duties did the corporal of the guard and the patrol have, in the way of inspecting the ship at night?

A. The corporal's guard went below every half hour to inspect the ship lights, etc., and the patrol took his place in the starboard gangway while he was gone.

Q. All this was faithfully carried out to the best of your knowledge?

A. It was. I visited the sentries every night, once before and once after midnight, while we were in Havana Harbor, and always found them vigilant and attending to their duties properly.

Q. Where were you at the time of the explosion?

A. On the port side, in the wardroom. I was in room No. 8, which is the fourth room from forward.

Q. Just state to the court what you felt, heard, and saw of the actual explosion or explosions that may have occurred.

A. I was sitting in my room reading, when I heard—I do not know how to explain it—a dull sound, a loud concussion, and the shaking of the ship. What impressed me most was the falling of things around the deck—I suppose electric-light fixtures, etc. I immediately rushed up on deck. The lights went out immediately. I rushed up on deck, and as I came on deck I saw the whole heavens full of sparks. There

was no flame then, only sparks up above. Lieut. Commander Wainwright had just called away the boats. I went to where the barge was hanging. Do you wish me to go on from there?

Q. No; I only want the actual explosion.

A. That is all I know, sir.

Q. How many shocks did you feel?

A. I only felt one, sir.

Q. The lights went out at that shock?

A. Yes, sir; immediately.

Q. And it was all over by the time you reached the deck?

A. Yes, sir.

Q. Was there any listing of the ship?

A. The ship listed to port.

Q. Immediately?

A. I don't know, sir. She was listed by the time I got on deck.

Q. Did she seem to be lifted at the time of the shock?

A. I didn't notice it, sir.

The judge-advocate requested that the testimony given by the witness be not read to him by the stenographer, but that he be directed to report to-morrow morning at 10 o'clock, when he will be furnished with so much of the record as contains his testimony and asked to withdraw for the consideration of the same, upon the completion of which he will be again called before the court and be given an opportunity to amend his testimony as recorded, or pronounce it correct. The request was granted, and the witness was instructed accordingly; whereupon he withdrew, after being cautioned by the president not to discuss matters pertaining to the inquiry.

Gunner JOSEPH HILL, U. S. Navy, appeared as a witness before the court, and was duly sworn by the president.

Examined by the JUDGE-ADVOCATE:

Q. Please state your name, rank, and to what ship you are attached.

A. Joseph Hill, gunner, United States Navy, attached to the U. S. S. *Maine*.

Q. How long have you been attached to the *Maine*?

A. About twenty-nine months.

Q. Ever since her commission?

A. Yes, sir.

Q. When were you relieved from duty as gunner last?

A. It was on or about the 18th of January, 1898.

Q. Will you look at this report of Captain Sigsbee, this being a copy of it, and state whether that seems to be practically correct in regard to the stowage of ammunition on board the *Maine* [Exhibit G shown to the witness].

A. This is about it. Do you mean at the time of the accident?

Q. I mean whether that is a correct report on June 30?

A. Yes, sir; that is about right.

Q. State to the court what material changes have been made since June 30, 1897, of any kind, in the stowage of ammunition.

A. I believe we have had small-arm target practice once. I think most of the small-arm ammunition was used up on board, but, as I understand, some time after I was put under suspension, they received about 70,000 rounds of 6-minimeter ball cartridges; also about 7,000 rounds of blank cartridges, 6-minimeter, and as near as I can understand there was some of that stored in the forward fixed-ammunition

room and some in the after fixed-ammunition room, and perhaps some was stowed in the armory. I am not sure about it.

Q. Where was the armory situated?

A. It was a little abaft of the midship line.

Q. On the main deck?

A. On the upper deck; yes, sir.

Q. Will you look specially at the amount of ammunition in the 6-inch reserve magazine, and tell us whether that was practically the amount there at the time of the explosion?

A. I see there is a lot of saluting powder here. Of course at the time I was put under suspension I believe it was somewhere about that, but since that I could not state what changes have been made there.

Q. Do you think the 6-inch charges were put there at that time?

A. Yes, sir.

Q. How were those 6-inch charges stowed? Were they stowed against the bulkheads or clear of the bulkheads, or how?

A. They were stowed on wooden racks that were made fast to the metal bulkheads.

Q. Did the powder tanks abut against the bulkheads?

A. Yes, sir.

Q. Did they abut against the bulkhead which divided the coal bunker from the 6-inch reserve magazine?

A. Yes, sir; the after tier did. The forward tier did not, because they were still forward.

Q. They were against the bulkhead?

A. Yes, sir.

Q. They abutted against the outboard bulkhead, I understand you to say?

A. In the reserve magazine?

Q. Yes.

A. No, sir; in the after one.

Q. You do not know which bunker that was against?

A. No, sir.

Q. But they did not abut against the fore and aft bulkhead on the outboard of the magazine?

A. The side of the tank was laying up there, I understand, but the end of the tank was aft. The tanks were stored fore and aft.

Q. You think they touched that outboard bulkhead which divides the magazine from the coal bunker?

A. Yes, sir.

Q. I will show you the plan. This bulkhead [pointing to a fore-and-aft bulkhead] divides the magazine from coal bunker A16. Did powder touch that bulkhead in its stowage?

A. Yes, sir; it did aft here.

Q. It did in the after part of the magazine.

A. Yes, sir; and it did in the forward part, too, because there was a lot of spare saluting powder stowed there.

Q. And that was close against the bulkhead?

A. Yes, sir; as near as I can remember the date of my suspension.

Q. Did you take the temperature of the magazines and shell rooms, as prescribed by regulations, regularly?

A. Yes, sir; I always made a practice of seeing the gunners take it.

Q. It was regularly taken, was it?

A. Once a day.

Q. Was there anything stowed in the magazines and shell rooms in

way of high explosives or anything of that kind which should not ve been stowed there according to ordnance instructions?
A. No, sir; I don't know of anything, to the date of my suspension.
Q. Were magazines and shell rooms always carefully locked after y had been opened?
A. Yes, sir.
Q. And the keys turned in?
A. Yes, sir.
Q. There was always a regular care taken in the delivery of the keys d the locking of the shell room and magazines?
A. Yes, sir.
Q. Are the magazines lined with wood?
A. No, sir; not as I remember. The plates are bare, of course, and e only woodwork I remember there is the stowage racks, holding wder, tanks, and shells. They are made fast to the metal bulkhead.
Q. Is there any electric wiring that leads into the magazine that uld be dangerous?
A. No, sir; the wires seemed to be well insulated. Of course they l into the light box, but, as I remember, they came down through e deck, and then went at an angle into the light box itself. As I member it, the wires went through a metal casing.
Q. You considered the wiring perfectly secure?
A. Yes, sir; of course it may have been woodwork painted over ite, but I never examined it very closely. It looked very much to me if it was metal.
Q. You never had any trouble with the light boxes in the way of ounding—with the lights in the light boxes?
A. Yes, sir; the dynamo tenders found considerable trouble in keep-g the magazine lights in order. They always gave as an excuse that e system was grounded down around the boxes.
Q. But the wiring laid directly from the upper deck into the boxes, two metal cases?
A. Yes, sir; but as I remember it, I think it went down through the ck in some places, and then went at an angle into the light box itself.
Q. Where were you at the time of the explosion?
A. I was in Havana.
Q. On shore?
A. Yes, sir.

By the COURT:

Q. How were the 6-inch powder tanks stowed with reference to the el of the ship in the reserve magazines?
A. They are stowed in line with the keel, I should judge about 8 or feet away from the keel, to port.
Q. How were they stowed? What kept them in place?
A. Some wooden racks which secured the metal bulkheads in the agazine, and the powder was stowed right on the racks.
Q. Tell us how these racks were made.
A. The magazine itself seemed to be divided. The after half of it is divided into two compartments, fore and aft like, and there were ong wooden uprights, secured in place to the deck above and to the ner bottom of the ship, and from this ran athwartships some other ttens, a sufficient distance apart so as to have the bottom tank rest one and the lid or upper part of the tank on the other.
Q. They were stowed on the side, were they not?
A. Yes, sir; the tanks were *stowed on the side.*

Q. Were these battens on which the tanks rested straight?
A. Yes, sir; they were horizontal.
Q. They were not cut out to receive the tank?
A. No, sir.
Q. Were these upright supports between the horizontal battens p on both sides, at the ends of these horizonal battens?
A. Yes, sir; as near as I can remember.
Q. Then one was against the bulkhead and the other was insid magazine?
A. Yes, sir.
Q. Please explain how the powder tanks could have rested ag the bulkheads.
A. The racks were secured with crosspieces, horizontal and ath ships. When the tank was shoved in place, it was shoved righ directly against the metal bulkheads.
Q. Where were these upright strips?
A. The upright strips were fore and aft in the magazine, makin bends like that [indicating].
Q. Fore and aft?
A. Two compartments, like.
(The witness here drew a sketch and explained what he mear reference to the sketch.)

The judge-advocate requested that the testimony given by th ness be not read to him by the stenographer, but that he be direct report to-morrow morning at 10 o'clock, when he will be furnished so much of the record as contains his testimony, and asked to with for the consideration of the same, upon the completion of which h be again called before the court and be given an opportunity to a his testimony as recorded, or pronounce it correct. The reques granted, and the witness was instructed accordingly; whereup withdrew, after being cautioned by the president not to discuss m pertaining to the inquiry.

Boatswain FRANCIS E. LARKIN, U. S. Navy, appeared as a wi before the court and was duly sworn by the president:

Examined by the JUDGE-ADVOCATE:

Q. Please state your name, rank, and to what ship you are atta
A. Francis E. Larkin, boatswain, U. S. Navy, attached to the S. *Maine.*
Q. How long have you been attached to the *Maine?*
A. From September, at the time of going in commission, unti present time.
Q. Were you on board the *Maine* the night of her explosion?
A. I was.
Q. Did you make the usual 8 p. m. reports to the executive of
A. Yes, sir; I did.
Q. Was everything secure in your department when you so repo
A. Yes, sir.
Q. Where were you at the time of the explosion?
A. Sitting abaft the after turret.
Q. On the main deck?
A. On the main deck.
Q. Please describe what you saw, felt, and heard.
A. I remember hearing an explosion. I do not remember the vic of it. I was struck on the head about the same time and daze

attempted to rise and fell again. Then I remember crawling over the wing awning on the port side of the cabin up on the poop deck.

Q. How did you get there?

A. I climbed over a small wing awning on the poop deck. I helped to lower the gig, letting down a 6-inch gun port in the rear, and breasting the gig off as she lowered. I then jumped in and took an oar.

Q. You do not remember distinctly the explosions, then?

A. No, sir.

Q. You do not know whether there was one or whether there was two, three, or four explosions?

A. No, sir.

Q. You do not remember any movement of the ship when the explosion first occurred?

A. Just a rendering and swaying all around me. It may have been from my dazed condition, or it may have been from the ship.

By the COURT:

Q. You went out in the boat to pick up the people in the water?

A. Yes, sir; we were pretty close to the wreck all the time. We picked up two or three men and handed them in other boats alongside.

Q. Where were these men?

A. There was one man picked out of a mass of wreckage there. I don't know what it was. I think Thompson was the man's name. I remember him being landed in the gig and given to another boat.

Q. On which side of the ship did you pick the man up?

A. On the starboard side.

Q. Were you at any time on the port side?

A. No, sir.

Q. Were there any men in the water on that side?

A. I didn't see any.

Q. You did not see any men on the port side?

A. On the starboard side. I didn't see anything at all on the port side.

Q. I asked you if you saw any men on the port side, and you said you did not.

A. No, sir.

Q. The gig lowered on the starboard side?

A. Yes, sir.

The judge-advocate requested that the testimony given by the witness be not read to him by the stenographer, but that he be directed to report to-morrow morning at 10 o'clock, when he will be furnished with so much of the record as contains his testimony and asked to withdraw for the consideration of the same, upon the completion of which he will be again called before the court and be given an opportunity to amend his testimony as recorded or pronounce it correct. The request was granted, and the witness was instructed accordingly; whereupon he withdrew, after being cautioned by the president not to discuss matters pertaining to the inquiry.

Carpenter GEORGE HELM, U. S. Navy, appeared as a witness before the court, and was duly sworn by the president.

Examined by the JUDGE-ADVOCATE:

Q. State your name, rank, and to what ship you are attached.

A. George Helm; carpenter, U. S. Navy; attached to U. S. S. *Maine*.

Q. How long have you been attached *to the Maine?*

A. Since the 17th of September, 1895.

Q. That is, since her commission?

A. I was ordered to her two weeks before then.

Q. And you became acquainted with the *Maine*, then, some time be she went into commission?

A. About two weeks.

Q. Since you have been attached to the *Maine* you have done a g deal of work below the berth deck in regard to keeping the comp ments clean and in proper order, and all that?

A. Yes, sir.

Q. You are well acquainted with the *Maine?*

A. Yes, sir; thoroughly.

Q. Do you know anything about the construction of the magazi of the *Maine?*

A. I have an idea.

Q. Could you tell how the powder is stored in the reserve 6-i magazines?

A. No, sir.

Q. You do not know how the racks are constructed?

A. No, sir.

Q. What is the thickness of the bulkhead between the reserve n azine and the 10-inch shell room?

A. A quarter of an inch, 10 pounds plating.

Q. And the same between the 10-inch shell room and the 10-i magazine?

A. The same.

Q. Where is the water-tight bulkhead abaft the reserve magazi immediately next to it?

A. I don't quite understand that.

Q. What water-tight bulkhead is there abaft the reserve magazi Does it abut against it or not?

A. That is a continuous bulkhead.

Q. There is a water-tight bulkhead immediately abaft it?

A. Yes, sir.

Q. What is the thickness of that bulkhead?

A. Quarter inch 10-pound plating.

Q. Is there one immediately forward of the reserve magazine?

A. Yes; that is a water-tight bulkhead.

Q. Is there one between the forward 6-inch magazine and the fi ammunition room?

A. Yes; that is water-tight.

Q. Is there one immediately forward of the forward 6-inch magazi

A. That is water-tight.

Q. Were all bulkheads and everything in good condition on bo the *Maine* just previous to her explosion?

A. First-class condition.

Q. What water-tight doors were in good condition?

A. They were all in good condition.

Q. Had the regular inspections been made all the time the ship in commission?

A. Yes, sir.

Q. Did you make the 8 p. m. reports on the night of her explosio the executive officer?

A. I did, sir.

Q. Was everything secure, as you reported it?

A. Everything was secure.

Q. *Where* were you at the time of the explosion?

A. I was in my bunk.
Q. Where is your bunk located?
A. Compartment C100.
Q. The forward end of that compartment?
A. The forward end, right alongside of the armor of the barbette or rret.
Q. It is on the berth deck?
A. On the port side.
Q. Well outboard?
A. Well outboard, near the skin of the ship.
Q. Just forward of the torpedoes?
A. Just forward of the torpedoes.
Q. Please state what you felt, heard, and saw during the time of the xplosions.
A. I only heard one report.
Q. What did it feel like?
A. It just felt about like a 6-inch or a 10-inch gun going off, as near s I can remember.
Q. That is all you heard?
A. That is all I heard.
Q. Were you injured in any way?
A. None that I know of; no, sir.
Q. You got on deck without any trouble?
A. I got on deck with considerable trouble; that is, onto the main eck.
Q. Did the ship seem to shake or shiver any during this report?
A. None that I can remember.
Q. Did she list any?
A. She listed to starboard. That is about all I can say.
Q. Were you wide awake when the thing first happened?
A. No, sir.
Q. Were you asleep?
A. Yes, sir.

By the COURT:

Q. Are you so intimately acquainted with the construction of the *Maine* that you could recognize portions of the wreck—that is, I mean of the hull—take a part of the hull detached from where it belongs entirely?
A. I don't know about that.
Q. Longitudinals and so on?
A. I guess they would be pretty hard to recognize, unless there is something there to go by, such as main drains or sluice valves, or something like that, that you could locate.
Q. Could you tell anything of the longitudinals? Are they not different in width or in depth?
A. Very little. I don't suppose there is more than 3 or 4 inches difference.
Q. How many longitudinals were there?
A. There were three, first, second, and third, and the bottom of the lower wing passage formed the fourth, and the upper wing passage formed the fifth.
Q. How high did the highest longitudinal come?
A. The third longitudinal is water-tight. The fifth is formed by the upper wing passage.
Q. Are not these longitudinals *sufficient in depth to* be able to recognize them from *their depth?*

A. Forward you could; yes. I guess you could recognize them forward as they taper so low there.

Q. What was the thickness of the protective deck of that ship?

A. Two inches. That is, two 1-inch plates riveted together.

Q. What was the thickness of her side armor?

A. Her side armor was 11 inch.

Q. All over?

A. No; it tapered down to 7 inches.

Q. Did it taper fore and aft?

A. It tapered aft.

Q. What was the thickness of the wood backing?

A. That I don't know.

Q. What were the sizes of the armor bolts?

A. The wooden backing was 8 inches.

Q. As far as you remember, how big were the bolts?

A. The bolts for screwing the armor were between 3¾ and 4 inches in diameter.

By the JUDGE-ADVOCATE:

Q. You said the armor belt was 11 inches. Are you certain of that? Was it not 12?

A. All I have to go by is the plan. [After examination of the plan.] They are 12 inches on top; yes, sir.

Q. What do you mean by saying the armor belt tapered aft?

A. She tapered aft abaft the engine room.

Q. You mean it sloped down aft?

A. It sloped; yes, sir.

Q. It did not taper and get thinner as it went aft, did it?

A. Oh, no.

By the COURT:

Q. That is what I understood you to mean.

A. That they get thinner?

Q. Yes.

A. No; it slopes.

By the JUDGE-ADVOCATE:

Q. How far down did the double bottoms extend?

A. The double bottoms extended from frame 12 forward to frame 73 forward.

Q. How far did the bilge keel extend forward?

A. The bilge keel started in, I think, at frame 28.

Q. Do you know how far they were from the keel?

A. No, I do not.

The judge-advocate requested that the testimony given by the witness be not read to him by the stenographer, but that he be directed to report to-morrow morning at 10 o'clock, when he will be furnished with so much of the record as contains his testimony and asked to withdraw for the consideration of the same, upon the completion of which he will be again called before the court and be given an opportunity to amend his testimony as recorded, or pronounce it correct. The request was granted and the witness was instructed accordingly; whereupon he withdrew, after being cautioned by the president not to discuss matters pertaining to the inquiry.

The court then, at 3.10 o'clock p. m., adjourned until 10 o'clock *to-morrow* morning, Tuesday, March 1, 1898.

EIGHTH DAY.

U. S. COURT-HOUSE, KEY WEST, FLA.,
Tuesday, March 1, 1898—10 a. m.

'he court met pursuant to adjournment of yesterday.
'resent: All the members of the court, the judge-advocate, and the nographer.
'he record of the proceedings of yesterday, the seventh day of the ıl, was read and approved.

ıieutenant BLANDIN, U. S. Navy, was called before the court and ıded so much of the record of yesterday as contained his testimony, ereupon he withdrew.
ıieutenant HOOD was called before the court and handed so much the record of yesterday as contained his testimony, whereupon he ıhdrew.
ıieutenant BLOW was called before the court and handed so much the record of yesterday as contained his testimony, whereupon he ıhdrew.
ıieutenant JUNGEN was called before the court and handed so much the record of yesterday as contained his testimony, whereupon he ıhdrew.
Naval Cadet BRONSON was called before the court and handed so ıch of the record of yesterday as contained his testimony, whereupon withdrew.
Lieutenant CATLIN was called before the court and handed so much the record of yesterday as contained his testimony, whereupon he thdrew.
Gunner HILL was called before the court and handed so much of the cord of yesterday as contained his testimony, whereupon he withdrew.
Boatswain LARKIN was called before the court and handed so much the record of yesterday as contained his testimony, whereupon he thdrew.
Carpenter HELM was called before the court and handed so much of e record of yesterday as contained his testimony, whereupon he thdrew.

P. A. Eng. FREDERICK C. BOWERS, U. S. Navy, appeared as a tness before the court, and was duly sworn by the president.

Examined by the JUDGE-ADVOCATE:

Q. Please state your full name, rank, and to what ship you are ached.
A. Frederick C. Bowers; passed assistant engineer, U. S. Navy; ached to the U. S. S. *Maine.*
Q. How long have you been attached to the *Maine;* since her nmission?
A. Since her commission.
Q. Are you the senior assistant engineer to the chief?
A. Yes, sir.
Q. And you have been all the time since the ship has been in com-ssion?
A. I have.
Q. Please state to the court what precautions have been taken on ırd the *Maine* during her *commission against* spontaneous com-ıtion of coal?

A. The order has been to inspect the bunkers every day, and log it. In the case of every bunker that had an escape door, we have always opened those doors to examine the bunkers; and generally the coal that has been in the ship the longest has been used the first, as near as possible.

Q. As far as you know, these orders have been carried out, have they?

A. Whenever I was on duty they were.

Q. When were you on duty last on board the *Maine*?

A. The 14th day of February.

Q. The day before the explosion?

A. Yes, sir.

Q. You came off that morning at what time?

A. At 8 o'clock.

Q. Can you give the history of bunker A16, which is the port bunker forward abreast of the 6-inch reserve magazine? Give the history of the coal inside.

A. That bunker was stored in either Newport News, Va., or at Norfolk. It contained soft coal; Pocahontas, I think. If it came from Norfolk, I inspected it. It was full of soft coal, about 40 tons.

Q. Were not the bunkers immediately abaft of it, B4 and B6, empty?

A. Yes, sir.

Q. The after bulkhead of A16 was easily accessible?

A. Yes, sir.

Q. What other sides were accessible to ascertain the temperature in case it should have been over hot?

A. You could feel it from the wing passage, and there was an escape door on platform deck A. There was a sign there, "Keep that door closed." That was on account of the opening into the passing room, the loading room.

Q. The 10-inch loading room?

A. Yes, sir; I have a sketch here that I made of the bunker showing the capacity.

Q. We only care for A16.

By the COURT:

Q. Just show me on the plan here where that bunker was accessible. Was it on that deck [indicating]?

A. No, sir; it was the deck above that—on the dynamo deck. That escape door came out here to go into the wing passage. There was an escape door in this corner, away forward—the inboard forward corner.

Q. That was not on the same deck as the magazines?

A. No, sir.

Q. The magazine was below that?

A. Below that; yes, sir. It was just the reverse of the other side. The other tank had an escape door below on the hydraulic room, platform B deck, at the after end. I mean the bunker on the other side, No. A15. That escape door was aft, and was on the platform deck below.

Q. There were two platform decks?

A. Yes; one for the dynamos, and the other for the hydraulic plant.

Q. On this deck [indicating] there was no way of reaching that bunker on the inside, was there?

A. On the outside.

Q. On the outside, but next to the 6-inch magazine?

A. No, sir.

Q. There was no way of reaching that?

A. We generally stored that bunker full, and did not use that escape door for the man to come out. We let him come out of the chute. We always wanted to keep that bunker full.

By the JUDGE-ADVOCATE:

Q. You say you inspected that coal when it was put into bunker A16?

A. If the coal came from Norfolk, I did. I was sent over there to inspect it.

Q. Did you consider it safe and reliable coal, from your inspection?

A. Yes, sir.

Q What is your opinion as to the heat generated in a bunker which has become lighted by spontaneous combustion in the bottom? Would it affect the upper part of the bottom materially and heat the bulkheads?

A. We could notice it very materially, I should think.

Q. In the upper part of the bunker?

A. Yes, sir.

Q. Was bunker A15 being used at the time?

A. When I went off watch we were using what we used from No. 4 bunker. We numbered them all.

Q. It is the forward starboard bunker, is it not?

A. Yes; when I went off watch we were using the after bunker in the forward fire room—the wing bunker—at 8 o'clock.

Q. Please point it out on the plan.

A. We were using coal out of this bunker, B10.

Q. Had you not been using coal out of A15?

A. Previously; yes, sir. When we were using coal out of B10, we had possibly about fifteen tons in this bunker.

Q. That is all?

A. Yes, sir.

Q. How much would it hold?

A. Twenty-five tons, when full.

Q. Do you know of any steam pipes in the *Maine* that were in dangerous proximity to the magazines and shell rooms?

A. No, sir.

Q. What was the condition of the after boilers—the two that were used for auxiliary purposes?

A. The fires were practically banked on the six furnaces of the two boilers. In what respect do you mean?

Q. The condition of the boilers.

A. The boilers were in good condition—in very good condition.

Q. You do not consider there was any danger of their having too much pressure on for safety when you were working them for auxiliary purposes on the evening of the explosion?

A. No, sir; the safety valves blow at about 130 pounds, and we usually carried 80 to 100 for auxiliary purposes.

Q. Where were you at the time of the explosion?

A. I was ashore.

By the COURT:

Q. In reference to taking the temperature of the bunkers, you say there was an order to examine them daily where they were accessible?

A. Yes, sir.

Q. In what did the examination consist?

A. Opening the escape doors *where they had* them, and feeling around the sides of *the bunkers.*

Q. Did you have the usual thermostats in the bunkers?

A. Yes, sir; but they didn't work very well. Sometimes they rang when there was no coal in the bunker.

Q. I believe you never had a fire from spontaneous combustion in that ship, did you?

A. No, sir. We thought we did once, but it was a leaky steampipe—a leaky exhaust pipe from the ice machine.

By the JUDGE-ADVOCATE:

Q. It gave the alarm?

A. It gave the alarm, and they moved the coal.

The Judge-Advocate requested that the testimony given by the witness be not read to him by the stenographer, but that he be directed to report to-morrow morning at 10 o'clock, when he will be furnished with so much of the record as contains his testimony and asked to withdraw for the consideration of the same, upon the completion of which he will be again called before the court and be given an opportunity to amend his testimony as recorded, or pronounce it correct. The request was granted, and the witness was instructed accordingly; whereupon he withdrew, after being cautioned by the president not to discuss matters pertaining to the trial.

Lieutenant JUNGEN was called before the court and handed so much of the record of yesterday as contained his testimony, whereupon he withdrew.

Asst. Eng. JOHN R. MORRIS, U. S. Navy, appeared as a witness before the court, and was duly sworn by the president.

Examined by the JUDGE-ADVOCATE:

Q. State your full name, rank, and to what ship you are at present attached.

A. John R. Morris, assistant engineer, U. S. Navy; attached to the U. S. S. *Maine.*

Q. How long have you been attached to the *Maine?*

A. Fourteen months and fifteen days.

Q. What has been your duty?

A. Serving as assistant engineer.

Q. Do you know of the orders of the ship in regard to taking temperatures of coal bunkers when you were on duty?

A. The bunkers were to be inspected every day, to see how they were heated. They were taken every day.

Q. Have you always carried out that order when on duty?

A. Yes, sir.

Q. When were you on duty last in the *Maine?*

A. February 15.

Q. You were on duty the day of the explosion?

A. Yes, sir.

Q. When did you inspect the bunkers on that day?

A. It was some time during the forenoon; I think between 10 and 11 o'clock.

Q. Can you remember distinctly making a careful inspection of bunker A16, the port forward bunker?

A. I remember of opening the escape doors, and there was no heat perceptible, more than just the temperature of the hydraulic room, *which is next to the* bunker.

Q. You made a careful inspection of that bunker on that day?
A. Yes, sir.
Q. In the forenoon?
A. In the forenoon; yes, sir.
Q. About what time?
A. About 10.30.
Q. Had you any occasion to go in coal bunkers B4 and B6, which were being painted? They are just abaft A16.
A. Yes, sir; I had had those bunker doors closed that night—the bunkers we had been painting.
Q. Which night?
A. The night of the explosion. The inspection was at 7.45.
Q. P. m.?
A. Yes, sir.
Q. Did you go into B4 and B6 at 7.45 p. m.?
A. Yes, sir; I went into B6.
Q. If there had been any combustion going on in A16 would you have noticed it when you went in B6?
A. Yes, sir; I looked into A15.
Q. I am speaking of A16, the port bunker. Which bunker did you go into at 7.45?
A. It was A15 that closed the door to B4.
Q. You did not go into B4?
A. I looked inside; yes, sir. There was nothing unusual there. I simply had the door closed down, as it was night inspection. I did not enter B6.
Q. What work had been going on in B4 and B6 that day?
A. None at all, sir. We had completed painting in those bunkers.
Q. Before you came on duty?
A. Yes, sir.
Q. Where were you at the time of the explosion?
A. I was sitting on the quarter deck—on the port side of the quarter deck, just abaft the after turret.
Q. Will you please state to the court what you felt, heard, and saw of the explosion?
A. I was thrown from a chair, and what I remember of the explosion seemed to me continuous for an appreciable length of time. I was then partially overcome by escaping gases from the smokestack from live boilers, and I was not conscious of anything further so that I could recall anything until I had gained the poop deck.
Q. What was the first sensation you had—the first shock you felt?
A. I saw fire and felt the ship going from under me. I can hardly describe my sensation.
Q. Were you asleep at the time in your chair?
A. No, sir; I was talking.
Q. Your view forward was obstructed by the turret, was it not?
A. Yes, sir.
Q. You could not describe any sensation you had or what you really heard or felt?
A. No, sir, I can not. I don't even remember the noise.

By the COURT:

Q. How were you thrown from your chair?
A. I was thrown aft, sir. At least I thought I was. I think I remember falling over that way. I was sitting talking to one of the other officers.

Q. Were you sitting abaft Mr. Hood?

A. Mr. Hood was on the other side of the deck. I was sitting abaft Mr. Larkin.

Q. On which side?

A. On the port side.

Q. You were on the port side?

A. I was on the port side, yes, sir; right out to the rail.

Q. That was Mr. Hood's side.

A. I don't remember where he was.

Q. You were thrown from your chair by the motion of the deck of the ship on which you sat?

A. Yes, sir; that is my recollection.

Q. You can not say what that motion was?

A. No, sir; I can not.

The judge-advocate requested that the testimony given by the witness be not read to him by the stenographer, but that he be directed to report to-morrow morning at 10 o'clock, when he will be furnished with so much of the record as contains his testimony and asked to withdraw for the consideration of the same, upon the completion of which he will be again called before the court and be given an opportunity to amend his testimony as recorded or pronounce it correct. The request was granted, and the witness was instructed accordingly; whereupon he withdrew, after being cautioned by the president not to discuss matters pertaining to the inquiry.

Naval Cadet POPE WASHINGTON, U. S. Navy, appeared as a witness before the court and was duly sworn by the president.

Examined by the JUDGE-ADVOCATE:

Q. State your name, rank, and to what ship you are attached.

A. Pope Washington; naval cadet; U. S. Navy.

Q. You are in the engineer department?

A. I am an engineer cadet; yes, sir.

Q. Attached to the U. S. S. *Maine?*

A. Yes, sir.

Q. How long have you been attached to the *Maine?*

A. Since the 17th of May, 1897.

Q. Where were you on the night of the destruction of the *Maine?*

A. I was in Havana.

Q. You were not on board?

A. No, sir.

There being no further questions to ask this witness, his testimony was read over to him by the stenographer and by him pronounced correct.

The witness then withdrew, after being cautioned by the president not to converse about matters pertaining to the inquiry.

Naval Cadet ARTHUR CRENSHAW, U. S. Navy, appeared as a witness before the court and was duly sworn by the president.

Examined by the JUDGE-ADVOCATE:

Q. State your name, rank, and to what ship you are attached.

A. Arthur Crenshaw; naval cadet, engineer division; attached to the U. S. S. *Maine.*

Q. Where were you on the night of the destruction of the *Maine?*

A. I was in my room, sir.

Q. Which was your room?
A. The forward room of the junior officers' quarters.
Q. Was there anyone else in you room?
A. Mr. Bronson.
Q. Please state to the court what you felt, heard, and saw of the destruction of the *Maine?*
A. I don't remember of hearing anything. The lights went out, and I felt a shock, but I don't remember of hearing any noise of any kind.
Q. Were you asleep at the time?
A. No, sir.
Q. How many shocks did you feel?
A. I can't say that I felt but one, sir.
Q. Was it a lurch of the ship or a shaking of the ship, or what?
A. It seemed to be a lurch of the ship.
Q. You are quite sure you were not asleep and that this woke you up?
A. I am quite sure I was not asleep sir.
Q. That is all you know about it?
A. Yes, sir.

By the COURT:

Q. You say you were in your room?
A. Yes, sir.
Q. Your room was which one?
A. The forward room of the junior officers' quarters.
Q. Was there anybody else in that room with you?
A. Yes, sir.
Q. Who was it?
A. Mr. Bronson.
Q. Were you in your berth?
A. No, sir; I was sitting down at my desk.
Q. You heard no noise?
A. No, sir; not that I can remember. It was simply a shock and the lights were extinguished.
Q. When the lights went out what did you do?
A. I rushed out of my room, sir, into the junior officers' mess room and then out of the forward door of the junior officers' mess room, and, it seemed to me, through the door that leads into the compartment just forward of that. There was a rushing noise of some kind. I couldn't tell just exactly what it was, so I made my way aft.
Q. You went aft through the passage?
A. Yes, sir.
Q. Then what did you do?
A. I ran for the steerage ladder.
Q. Just abaft the turret?
A. Yes, sir; it leads up just abaft the turret. There was no ladder there, though.
Q. There was no ladder there?
A. No, sir; not that I could feel. I couldn't see anything. I could feel no ladder there.
Q. Then what did you do?
A. Then I felt for the engine-hatch bulkhead, that leads up in that compartment and felt my way along that to the wardroom ladder.
Q. You went up the wardroom ladder?
A. Yes, sir.
Q. Do you know what the other officer, your roommate, did?
A. No, sir; I do not. I supposed he was right behind me, though, sir. I couldn't say.

Q. Was he in the room at the time you were?
A. Yes, sir.
Q. Did the water reach the compartment where you were before you left it?
A. No, sir.

The judge-advocate requested that the testimony given by the witness be not read to him by the stenographer, but that he be directed to report to-morrow morning at 10 o'clock, when he will be furnished with so much of the record as contains his testimony and asked to withdraw for the consideration of the same, upon the completion of which he will be again called before the court and be given an opportunity to amend his testimony as recorded or pronounce it correct. The request was granted, and the witness was instructed accordingly; whereupon he withdrew, after being cautioned by the president not to discuss matters pertaining to the inquiry.

Lieutenant BLANDIN here entered the court.
The JUDGE-ADVOCATE. Do you wish to make some corrections in your testimony?
Lieutenant BLANDIN. Yes, sir.
The JUDGE-ADVOCATE. Please state them to the stenographer.
Lieutenant BLANDIN. On page 242, in next to the last line, it should read "dog watches" instead of "deck watches."
On page 243, the last paragraph should read: "After the third quarter watch was set at 9 o'clock at pipe down."
On page 244, in the eighth line, it should be "knee deep" instead of "not deep."
In the tenth line, on the same page, it should read, after the word "poop," "it was Private Loftus, I think."
On page 246, in the tenth line, insert "had" before "swung."
On page 247, in the seventh paragraph, it should read "almost immediate" instead of "almost within a minute."
The JUDGE-ADVOCATE. Is your testimony as amended correct?
Lieutenant BLANDIN. Yes, sir.

The witness then withdrew, after being cautioned by the president not to converse about matters pertaining to the inquiry.

Naval Cadet BRONSON entered.
The JUDGE-ADVOCATE. You have read over your testimony?
Naval Cadet BRONSON. Yes, sir.
The JUDGE-ADVOCATE. Is it correct?
Naval Cadet BRONSON. With the exception of two small mistakes.
The JUDGE-ADVOCATE. Please state what the mistakes are that you wish to correct.
Naval Cadet BRONSON. In the third answer, on page 294, it should read: "I have performed boat duty, deck duty under the supervision of the commissioned officer of the deck."
On page 295, the third answer—the third sentence of that answer—should be removed—"That is the impression which I have now." I have not any such impression as that now.
The JUDGE-ADVOCATE. What is the third sentence which you wish removed?
Naval Cadet BRONSON. "That is the impression which I have now."
The JUDGE-ADVOCATE. You want that stricken out?
Naval Cadet BRONSON. Yes, sir.
The JUDGE-ADVOCATE. Is your testimony as amended correct?

Naval-Cadet BRONSON. Yes, sir.

The witness then withdrew, after being cautioned by the president not to converse on matters pertaining to the inquiry.

Lieutenant CATLIN entered.

The JUDGE-ADVOCATE. You have read over your testimony?

Lieutenant CATLIN. Yes, sir.

The JUDGE-ADVOCATE. Is it correct?

Lieutenant CATLIN. Except in one instance.

The JUDGE-ADVOCATE. Please read to the stenographer the corrections you wish to make.

Lieutenant CATLIN. In answer to question 5, on page 306, I wish to change the language as follows:

When we first went into the harbor, there were two extra sentinels put on—one on the forecastle and one on the poop—armed with rifles. They had special orders to challenge all boats which approached the ship near enough for a challenge, and in case any boat came toward the ship—evidently coming to the ship—to report immediately to the corporal of the guard, who would report to the officer of the deck.

On page 307, line 12, it should read, "The corporal of the guard," instead of "The corporal's guard."

At the bottom of the page it should be "a heavy concussion," instead of "a loud concussion."

The JUDGE-ADVOCATE. Is your testimony as amended now correct?

Lieutenant CATLIN. Yes, sir.

The witness then withdrew, after being cautioned by the president not to converse on matters pertaining to the inquiry.

Boatswain LARKIN entered.

The JUDGE-ADVOCATE. You have read over your testimony?

Boatswain LARKIN. Yes, sir.

The JUDGE-ADVOCATE. Is it correct, as recorded?

Boatswain LARKIN. With two changes.

The JUDGE-ADVOCATE. State what corrections you wish to make.

Boatswain LARKIN. I wish the answer to the question "How did you get there?" meaning the poop deck, on page 318, to appear as follows: "I climbed over a small wing awning on the main deck leading to the poop deck, on the port side of the cabin."

The JUDGE-ADVOCATE. You wish to change the first sentence in that answer, do you, to what you have just said?

Boatswain LARKIN. "I climbed over a small wing awning on the poop deck" should be "I climbed over a small wing awning on the main deck leading to the poop deck, on the port side of the cabin."

The JUDGE-ADVOCATE. That is the way you want it to read—that first sentence?

Boatswain LARKIN. Yes, sir.

On page 319, in answer to the question "You did not see any men on the port side?" I wish to say, "I didn't see anything at all on the port side."

The JUDGE-ADVOCATE. That is the way you wish your answer to read?

Boatswain LARKIN. Yes, sir.

The JUDGE-ADVOCATE. Is your testimony, as amended, correct?

Boatswain LARKIN. Yes, sir.

The witness then withdrew, after being cautioned by the president not to converse on matters pertaining to the inquiry.

Private EDWARD MCKAY, U. S. Marine Corps, appeared as a wit ness before the court, and was duly sworn by the president.

Examined by the JUDGE-ADVOCATE:

Q. State your full name, rank, and to what ship you are attached?

A. Edward McKay, private, U. S. Marine Corps, attached to U. S battle ship *Maine*.

Q. Were you on board the *Maine* at the time of her destruction?

A. Yes, sir.

Q. State exactly where you were at the first intimation there was o any trouble.

A. I was right on the poop.

Q. On which side?

A. I was on the starboard side.

Q. Aft or forward?

A. Aft.

Q. What were you doing there?

A. I was on watch, sir.

Q. Tell the court what you felt, heard, and saw, in regard to th destruction of the *Maine*.

A. I walked over to the starboard side and was looking over the side t see if there was any boats around the ship, and there didn't seem to b a ripple on the water at all. There wasn't a boat in sight; I didn' have to challenge a boat that night above all nights. I was lookin over the starboard side, and all at once there was a flash of fire hit m right in the face and knocked me about half way across the deck, an during the flash the explosion came—just immediately afterwards. Afte the flash hit me in the face, then the explosion was, and the wood an iron commenced to fall around and lit on the awning all around me and shortly after the officers came up. I thought I was the only on left on the ship when the explosion came, and the officers came up an we lowered the two boats and jumped into the boats to pick up th men floating around.

Q. Were the poop awnings spread?

A. Yes, sir.

Q. What was the first thing you felt?

A. The first thing I felt was a shock.

Q. Of the ship?

A. Yes, sir.

Q. How did it feel?

A. It felt as if it was rising up.

Q. Did you feel more than one of these shocks?

A. Only one, sir.

Q. Did you hear any noise?

A. I didn't hear a bit of noise, only the explosion.

Q. One explosion?

A. One explosion.

Q. Did the explosion come before this first shock or afterwards?

A. It came after the shock.

Q. Did you feel any water thrown up into the air?

A. No, sir.

Q. Did you see any shoot of flame up into the air?

A. No, sir; I did not.

Q. The awning obstructed your view, did it?

A. Yes; the forward part of the ship. All I saw was the flash h me in the face; the flash of fire, and then the explosion.

By the COURT:

Q. What do you mean by a flash in your face?

A. The same as if anything would strike you in the face. It seemed like a flash of fire.

Q. You do not mean that it was right in your face?

A. No, sir; but it seemed as if it was striking you in the face—the flash was, and then the explosion followed afterwards.

Q. Where was the fire?

A. It seemed to be coming from about the middle part of the ship.

Q. It was a long way from where you were?

A. Yes, sir; it was.

Q. How far forward could you see?

A. I could see to the superstructure, about amidships, sir.

Q. Why could you not see farther than that?

A. The awnings stopped my view, sir.

Q. You were sensitive of a vivid flash of flame or light, as I understand it?

A. Yes, sir.

Q. Did you have the sensation of the shock to the ship before that, or at the same instant?

A. They came both very near the same instant, but there was a small shock before the flame came up.

Q. The ship seemed to rise, did it?

A. Yes, sir; it seemed as if something lifted her up and tipped her right over on the port side.

Q. Then was there an explosion besides that?

A. The explosion was just after the light was, when the fire seemed to strike me in the face. The fire came right instantly afterwards. Then the ship blew up and keeled over onto the port side.

Q. But the first shock, the lifting of the deck under your feet, was the first thing you felt?

A. Yes, sir; there was only one shock that I felt.

Q. Do you mean to say you did not feel the explosion?

A. Oh, yes, sir.

Q. Was that the shock?

A. The shock and the explosion was at the same time.

Q. Where did the flash come in with reference to the lifting of the deck and the explosion?

A. It seemed to come from about——

Q. I did not ask where it came from. You were standing on your feet when the shock came?

A. Yes, sir.

Q. When you heard the explosion?

A. Yes, sir.

Q. Were they together, instantly?

A. They were instantly together. You could not notice the difference between. It was just like that [indicating].

Q. Was the flash between them?

A. Yes, sir.

The judge-advocate requested that the testimony given by the witness be not read to him by the stenographer, but that he be directed to report to-morrow morning at 10 o'clock, when he will be furnished with so much of the record as contains his testimony and asked to withdraw for the consideration of the same, upon the completion of which he will be again called before the court and be given an oppor-

tunity to amend his testimony as recorded, or pronounce it correct The request was granted and the witness was instructed accordingly whereupon he withdrew, after being cautioned by the president not t discuss matters pertaining to the inquiry.

Apprentice AMBROSE HAM, U. S. Navy, appeared as a witness befor the court, and was duly sworn by the president.

Examined by the JUDGE-ADVOCATE:

Q. Give your full name, rate, and to what ship you are attached.
A. Ambrose Ham, apprentice, first class, U. S. Navy.
Q. What ship?
A. U. S. S. *Maine.*
Q. Were you on board the *Maine* at the time of her destruction?
A. Yes, sir.
Q. At the first intimation of any trouble, tell us exactly where yo were.
A. I was on the starboard side of the poop, near the forwar 6 pounder.
Q. Near the forward break of the poop?
A. Yes, sir.
Q. What were you doing there?
A. I was standing there. I had just been talking to Waters. I don't know his first name. He was a lamplighter.
Q. What were you doing there; were you on duty?
A. Yes, sir; I was on duty.
Q. What duty?
A. Signal duty.
Q. Tell the court exactly what you felt, heard, and saw of th destruction of the Maine.
A. I was standing facing forward, and I was about to turn aroun when I saw a flash of light—a flame, which seemed to envelop th whole ship—followed by a report. I was struck in the face by a flyin piece of iron. Then there was a perfect hail of flying iron fell all abou me. Then the second report. I saw the things flying from forward. I didn't know exactly where the explosion was. After that the officer came up on the poop, and I assisted in lowering the gig.
Q. You speak of two explosions?
A. Yes, sir; it sounded like a roar, the second one.
Q. What did the first one sound like?
A. It was a sharp report.
Q. How far were they apart?
A. There was only an interval of a couple of seconds.
Q. Did you feel the ship shake at either explosion?
A. The ship seemed to lift right out of the water.
Q. At which explosion?
A. At the second explosion.
Q. Did you feel any trembling or shaking or lifting of the ship at the first explosion?
A. No, sir.
Q. When did you see the flame you speak of?
A. The first thing.
Q. Before you heard either explosion?
A. Yes, sir.
Q. You say there was a decided, distinct interval between the two explosions?

A. Yes, sir.
Q. One was like a shot and the other like a roar?
A. Yes, sir.
Q. The second one being the roar?
A. Yes, sir.
Q. Could you see any large upshoot of flame forward?
A. Yes, sir; there is where I saw it first.
Q. Before either one?
A. Yes, sir.
Q. But at the second explosion did you see any large upshoot of flame?
A. No, sir. At the second explosion I was hit in the face, and I had to cover my face like that [indicating] to avoid some flying pieces of iron. So I couldn't see no more after that.
Q. Was there any trembling of the ship at the first shot?
A. No, sir.

By the COURT:

Q. Were you looking forward at the time?
A. I was about to turn around when I saw the flash.

The judge-advocate requested that the testimony given by the witness be not read to him by the stenographer, but that he be directed to report to-morrow morning at 10 o'clock, when he will be furnished with so much of the record as contains his testimony and asked to withdraw for the consideration of the same, upon the completion of which he will be again called before the court and be given an opportunity to amend his testimony as recorded or pronounce it correct. The request was granted and the witness was instructed accordingly; whereupon he withdrew after being cautioned by the president not to discuss matters pertaining to the inquiry.

Lieutenant HOOD here appeared before the court.

The JUDGE-ADVOCATE. Lieutenant Hood, have you read over your testimony?

Lieutenant HOOD. I have.

The JUDGE-ADVOCATE. Do you find it correct?

Lieutenant HOOD. I find it correct with the exception of a few slight changes.

The JUDGE-ADVOCATE. Will you please read them to the stenographer?

Lieutenant HOOD. On page 249, in the first answer, leave out "late."

On page 251, in the second answer, leave out "I" and substitute "ammunition was."

On page 256, in the first line, leave out "went up on" and substitute "reached." On the same page, in the ninth line, insert "had" at the beginning of the line.

On page 260, in the third line, substitute "to" for "through." In the second answer on the same page, leave out the word "gun." In the third line from the bottom on page 261, put a period after "air" and leave out the word "but."

The JUDGE-ADVOCATE. Is your testimony as amended correct?

Lieutenant HOOD. It is correct.

The witness then withdrew, after being cautioned by the president not to converse about matters pertaining to the inquiry.

Lieutenant BLOW here entered the court.

The JUDGE-ADVOCATE. Lieutenant Blow, have you read over your testimony?

Lieutenant BLOW. Yes, sir.

The JUDGE-ADVOCATE. Is it correct as recorded?

Lieutenant BLOW. It is practically correct, with one exception. page 272, I wish to say: "I can recall two occasions when the ship v heading in the same direction, approximately."

Lieutenant BLOW, U. S. Navy, a witness heretofore examin resumed the witness stand, and, after being cautioned by the presid that the oath previously taken by him was still binding, testified follows:

Examined by the JUDGE-ADVOCATE:

Q. I wish to ask you, Mr. Blow, the comparative amount of wreck on the port and starboard sides, as you pulled around the ship.

A. The wreckage on the starboard side was much greater. It beg I should say, about on the starboard beam, and extended complet around what was the bow of the ship. There was wreckage on t port bow, but a small amount, as I remember it. I should think t wreckage on the starboard side extended as much as half a shi length from the side.

The testimony of the witness was then read over to him by t stenographer, and by him pronounced correct. The witness then wi drew, after being cautioned not to converse about matters pertaini to the inquiry.

Naval Cadet BOYD here entered the court.

The JUDGE-ADVOCATE. Mr. Boyd, have you read over your testimon

Naval Cadet BOYD. I have.

The JUDGE-ADVOCATE. Is it correct as recorded?

Naval Cadet BOYD. It is not.

The JUDGE-ADVOCATE. Do you wish to make some corrections?

Naval Cadet BOYD. Yes, sir.

The JUDGE-ADVOCATE. Please state them to the stenographer.

Naval Cadet BOYD. On page 298 the question is understood mean "What are your duties as mate of the berth deck after sunset My answer should read: "To see that all compartments are water-tig except those authorized to be open." One unnecessary sentence shou be struck out.

On page 302, "Was there any listing of the ship?" should be: "W there any lifting of the ship," the word "lifting" being emphatic.

On page 303, in the answer reading "There is a hatch in the f ward compartment," strike out the word "forward." On the sa page, in the sentence reading "There is a passage between the room the word "sail" should be inserted before the word "room." On t same page the question "How did you get down to the magazines?" understood as "How did you get down to the 10-inch magazine?"

The JUDGE-ADVOCATE. As amended, your testimony is correct?

Naval Cadet BOYD. It is correct.

The witness then withdrew after being cautioned by the preside not to discuss matters pertaining to the inquiry.

Apprentice C. J. DRESSLER, U. S. Navy, appeared as a witne before the court, and was duly sworn by the president.

Examined by the JUDGE-ADVOCATE:

Q. State your full name, rate, and to what ship you are attached.

A. G. J. Dressler; apprentice, first-class, U. S. Navy; attached to t *U. S. S. Maine.*

Q. Were you on board the *Maine* at the time of her destruction?

A. Yes, sir.

Q. State to the court exactly where you were at the first intimation there was of any trouble.

A. I was up in the midship superstructure, on the port side, right abreast the crane locker.

Q. What were you doing there?

A. I had been writing a letter at the time.

Q. You were writing at the time it started?

A. Yes, sir.

Q. Tell the court exactly what you heard, felt, and saw.

A. I didn't feel anything, nor I didn't see anything; but I must have lost my senses at the time, because when I came to again I had been sitting on the hammock netting on the same side. I didn't feel no shock, nor I didn't see anything at all. I guess something must have struck me and knocked me senseless; but as soon as I came to, two or three minutes afterwards, I had been sitting on a hammock netting.

Q. I understood you to tell me yesterday that you felt the shocks. Did I misunderstand you?

A. I believe you misunderstood me.

Q. The first thing you knew was when you recovered from being knocked senseless?

A. Yes, sir.

By the COURT:

Q. What did you see?

A. While I was sitting on the hammock netting I saw the boats. Mr. Bronson was in the whaleboat. He pulled around the ship and tried to save those that he could. There was two or three Spanish boats came alongside, and all those that they could rescue they took off, I suppose. I didn't see anything further, because I went in one of the Spanish boats and went aboard of the Spanish man-of-war myself.

Q. You were sitting on the hammock rail of the superstructure deck, were you?

A. Yes, sir.

Q. Whereabouts? Which side?

A. On the port side.

Q. On the port side of the ship?

A. Yes, sir.

Q. What was just in front of you that was not there usually?

A. The boats were there—the two Spanish boats—right there on the port side.

Q. I am not speaking about that. I am speaking about the wreck now.

A. The smokestacks. They went right over the superstructure. They laid right slantingly across the after part of the superstructure, and the crane was doubled right up. It hadn't been knocked down though.

Q. That was on which side?

A. On the port side. The water was just even with the awning on that side. The awning was flapping up and down in the water.

Q. What awning was that?

A. That was the main-deck awning.

Q. You were sitting above that?

A. Yes, sir; I was over on top of the hammock netting.

Q. How far was this from the place you were sitting before the explosion?

A. I don't suppose more than two or three steps. I was sitting right down on deck, under a light.

The judge-advocate requested that the testimony given by the witness be not read to him by the stenographer, but that he be directed to report to-morrow morning at 10 o'clock, when he will be furnished with so much of the record as contains his testimony and asked to withdraw for the consideration of the same, upon the completion of which he will be again called before the court and be given an opportunity to amend his testimony as recorded or pronounce it correct. The request was granted and the witness was instructed accordingly; whereupon he withdrew after being cautioned by the president not to discuss matters pertaining to the inquiry.

Carpenter HELM here appeared before the court.

The JUDGE-ADVOCATE. Mr. Helm, is your testimony, as recorded, correct?

Carpenter HELM. It is except for the following corrections:

On page 322 my answer should read, "One water-tight door frame of paymaster's issuing room was not in good condition, and was recommened to be repaired at the navy-yard, as it could not be repaired by the ship's force."

By the JUDGE-ADVOCATE:

Q. You wish to add that to the answer you have given?

A. Yes, sir.

Q. Where was this issuing room?

A. It was forward, over the 6-inch magazine, two decks above.

On page 323 I would like to change "she listed to starboard" to "she listed to port." I would like to have the word "none" changed, on that same page, to "not" in answer to the question "Were you injured in any way?"

On page 324, in the fourth answer, I wish to strike out "as they taper so low there," and in the same answer strike out the word "guess" and insert "think."

On page 325, in the third answer, change "three and three-quarters" to "four and three-quarters."

Q. As amended, is your testimony correct?

A. It is.

The witness then withdrew after being cautioned by the president not to converse about matters pertaining to the inquiry.

Sergeant MICHAEL MEHAN, U. S. Marine Corps, appeared as a witness before the court, and was duly sworn by the president.

Examined by the JUDGE-ADVOCATE:

Q. State your full name, rank, and to what ship you are attached.

A. Michael Mehan; sergeant U. S. Marine Corps; serving on board the U. S. S. *Maine*.

Q. Were you on board the *Maine* at the time of her destruction?

A. Yes, sir.

Q. What were you doing? Were you on duty?

A. On duty, sir.

Q. As what?

A. As sergeant of the guard, sir.

Q. Where were you at the first sign of any trouble?

A. On the starboard gangway.

Q. On what part of the gangway?

A. It was about midways in the gangway, between the forward turret and the after part of the gangway.

Q. About abreast of the crane?

A. About abreast of the crane; yes, sir.

Q. On the main deck?

A. On the main deck.

Q. You were standing up?

A. Standing up.

Q. Looking which way?

A. I was looking outboard, sir.

Q. State exactly what you felt, heard, and saw.

A. I was in the gangway when I first heard this explosion. The next thing I knew about it I was fired overboard in the water—lifted clean off the gangway and fired in the water. The next thing I was picked up by a boat.

Q. You heard only one explosion?

A. Only one explosion.

Q. Did you feel any shock before that explosion?

A. The explosion and the shock, I thought, was both together.

Q. How far from the ship were you thrown?

A. When I came up from the surface of the water I was about 15 or 20 feet out from the gangway on the starboard side of the ship.

Q. Were you knocked senseless?

A. No.

Q. Simply lifted up and out?

A. Lifted up and thrown out in the water.

Q. How high did you go?

A. I don't think I went very high in the air. I was simply thrown out in the water. When I left the ship I must have swam out, because when I came up I was about 15 or 20 feet from the side of the ship. That is about all I know about it. Afterwards I was picked up by a boat.

By the COURT:

Q. You were thrown off where?

A. I was thrown off the starboard gangway out in the water.

Q. Could you describe the kind of motion of the deck?

A. I could not, sir; I thought the deck came right up and fired me out.

The judge-advocate requested that the testimony given by the witness be not read to him by the stenographer, but that he be directed to report to-morrow morning at 10 o'clock, when he will be furnished with so much of the record as contains his testimony, and asked to withdraw for the consideration of the same, upon the completion of which he will be again called before the court and be given an opportunity to amend his testimony as recorded or pronounce it correct. The request was granted, and the witness was instructed accordingly; whereupon he withdrew, after being cautioned by the president not to discuss matters pertaining to the inquiry.

Corporal FRANK G. THOMPSON, U. S. Marine Corps, appeared as a witness before the court, and was duly sworn by the president.

Examined by the JUDGE-ADVOCATE:

Q. State your full name, rate, and to what ship you are attached.

A. Frank G. Thompson; corporal, *U. S. Marine* Corps; attached to and serving on board *of the U. S. S. Maine.*

Q. Were you on board the *Maine* at the time of her destruction?

A. I was, sir.

Q. Where were you at the first intimation of any trouble?

A. Lying in my hammock.

Q. Where was your hammock?

A. On the port gangway.

Q. Describe where on the port gangway and how it was slung.

A. It was slung from the first stanchion forward of the gangway—from the stanchion to the port.

Q. Right across the main deck, then?

A. Right across the main deck.

Q. In the afterpart of the gangway?

A. In the afterpart of the gangway.

Q. About how far forward of the turret?

A. About 25 feet—20 feet.

Q. Which way was your head?

A. Inboard, sir.

Q. Were you wide awake?

A. I was wide awake. I was looking aft, with the blanket just over my head. I was lying there just making myself comfortable. It seems as though I had made myself comfortable to have a night's rest. It was my night off, and I had just turned in. I hadn't turned in more than fifteen minutes—ten minutes, I don't believe, at the latest.

Q. Tell the court exactly what you felt, heard, and saw of the destruction of the *Maine*.

A. The first I realized, lying in my hammock, I was deliberately thrown in the air through the port awning on the port side. I went as high as the superstructure, because I could see the superstructure. I landed on my side, here where I have the scar. I laid on the deck stunned for about two or three seconds, it would seem. Just then the ship seemed to give a lurch, and she gradually commenced to sink. As she commenced to sink I realized where my position was and I regained my feet. I grasped the ridgerope, and hung onto the ridgerope until the water had come up almost to my neck. Just then naval cadet Mr. Bronson came along in the boat and threw me a line. He told me I would either have to sink or swim for my life. I let go, and I went down once and came up. I grasped the rope and they pulled me to the boat.

Q. That was the ridgerope that was going along the port gangway?

A. The port gangway, where the awning was made fast.

Q. The awning was in the port gangway?

A. In the port gangway.

Q. You think you were thrown through that awning?

A. I was thrown deliberately through it, because I remember coming down through it to where I was lying there.

Q. I suppose the awning itself was thrown up?

A. It must have been, because I remember there was a rent in the awning where I came through.

Q. Did you go up in the air at the very first shock you felt?

A. That was the first thing I realized.

Q. What did you hear at that time?

A. I didn't hear anything.

Q. Did you see anything?

A. I couldn't see anything on account of the darkness and smoke, and I smelt steam.

Q. *Were you stunned?*

A. I was stunned; yes, sir. I was stunned for two or three seconds before I realized where I was. I thought at first that war had taken place and the Spaniards had opened on us. I heard groaning and men crying for help.

By the COURT:

Q. This was outside the superstructure? You were on the main deck?

A. On the main deck; yes, sir; port side.

Q. That, of course, was not your billet?

A. No, sir; my billet was below in the marine quarters, but being so close down below, there was two or three of the boys slept on the port gangway.

Q. Were you forward or abaft of the crane?

A. I was abaft the crane. I had been reading up to 9 o'clock that night. Sergeant Brown, the mail orderly, wanted me to give him the book I had after I was through with it. I read until very nearly 10 minutes past 9. Then I took the book down below to the master-at-arms compartment. Sergeant Brown was lying down there, where he always slept, and I gave him the book and went up to the head. From the head I came down to the port gangway, and had just turned in in my hammock.

The judge-advocate requested that the testimony given by the witness be not read to him by the stenographer, but that he be directed to report to-morrow morning at 10 o'clock, when he will be furnished with so much of the record as contains his testimony, and asked to withdraw for the consideration of the same, upon the completion of which he will be again called before the court and be given an opportunity to amend his testimony as recorded, or pronounce it correct. The request was granted, and the witness was instructed accordingly; whereupon he withdrew, after being cautioned by the president not to discuss matters pertaining to the inquiry.

Lieutenant JUNGEN here entered the court.

The JUDGE-ADVOCATE. Mr. Jungen, you have read over your testimony?

A. I have, sir.

Q. Is it correct as recorded?

A. I desire to make some corrections, as follows:

Page 283, line 14, for the word "watch" substitute the word "hold."

Page 284, line 16, for the word "an" substitute the word "a," and between "a" and the word "explosion" insert the words "well defined," so that the whole sentence will read "It was not a well-defined explosion."

Same page, line 25, erase the word "or" after the word "ashes," and in place thereof insert "mingled with," so as to read "ashes mingled with brown smoke."

Same page, last line, for the word "try" insert "see."

Page 285, line 4, for the word "then" substitute the words "after that."

Same page, line 21, erase the word "there" and substitute the words "the harbor."

Page 286, line 19, after the first word "boat" insert the word "fall."

Same page, same line, after the second word "boat" insert the word "fall."

Page 287, line 2, for the word *"got" substitute* the word "was."

Same page, line 12, put the following word "having" before the word "only."

Same page, line 13, erase the last two words "and myself."

Same page, line 17, between the words "took" and "the" insert the words "charge of," and in the same line, after the word "around," add the words "the stern of the ship."

Same page, line 23, after the word "turret" insert the words "On the starboard side."

Same page, line 28, for the word "starboard" substitute the word "port" and erase the word "again."

Same page, line 29, erase the word "then" after the word "ship."

Page 290, line 20, for the word "boat" substitute the word "men."

Same page, line 26, after the word "around" add the words "that way."

The JUDGE-ADVOCATE. Is your testimony as amended correct?

A. It is.

Lieut. C. W. JUNGEN, recalled to the witness stand and warned by the president that the oath previously taken by him was still binding.

Examined by the JUDGE-ADVOCATE:

Q. Please state the comparative amount of wreckage on the port and starboard sides when you were pulling around the ship in the barge.

A. It appeared to me most of it was on the starboard side.

Q. Was not nearly all of it on the starboard side?

A. The only noticeable wreckage on the port side that I could see at all was the smoke pipe. I would like to add that my impression at first was, when I saw the wreckage, that the explosion was on the starboard side, because I saw something that looked to me like the starboard forward turret having been thrown up to port. That turned out afterwards to be the superstructure, as I learned; also that what I took to be the port crane was standing.

There being no further questions to ask this witness, his testimony was read over to him by the stenographer and by him pronounced correct.

The witness then withdrew, after being cautioned by the president not to converse about matters pertaining to the inquiry.

Master at Arms JOHN B. LOAD, U. S. Navy, appeared as a witness before the court, and was duly sworn by the president.

Examined by the JUDGE-ADVOCATE:

Q. State your full name, rate, and to what ship you are attached.

A. John B. Load, master at arms, third class, U. S. Navy, attached to the U. S. S. *Maine*.

Q. Were you on duty as master at arms the night of the destruction of the *Maine*?

A. No, sir; I was not. The second-class master at arms was on duty.

Q. Where were you at the first intimation of any trouble?

A. I had just left the second-class master at arms, and he was telling me if I wanted the keys during the night, or in case they should be wanted, where to get them. I left him to go to my hammock, which was slung underneath the middle superstructure, right outside the armory door.

Q. Where were you at the moment you felt the first trouble?

A. I was just taking off my shirt, and was going to turn in. From where I was standing I could look out the after door.

Q. That is right by the armory?

A. Right by the armory, sir; on the starboard side.

Q. On the after part of the superstructure?

A. Yes, sir.

Q. Your hammock was inside the superstructure, forward of the armory?

A. Forward of the armory.

Q. And nearly abreast of the door?

A. Nearly abreast of the door.

Q. You were about abreast of the refrigerator?

A. I was close to where that steerage ice box stood; yes, sir.

Q. You were standing up at the time?

A. I was standing up at the time. I had just put my shirt on the hammock.

Q. Please state to the court exactly what you felt, heard, and saw.

A. You could see a red flame outside the ship. It seemed as if it was a small boat had struck the ship at first. She seemed to tremble, and then the whole deck where I was standing seemed to open, and there was a flash of flame came up, and whether I went up in the air, or whether I went down, I couldn't say at first. Then I found myself down below, and the water rushing in on me. I could hear a second explosion, and it seemed to lift the weight off of what was on me where I was lying down, and I managed to crawl out of there. I found myself on the port side of the upper superstructure. That place all seemed to be cleared. At that time the port awning was burning, and people was lying on it. Schwartz was one. He called me by name and asked me to give him some help to get off of there. The only thing I could find was a piece of wire rope. I helped him and two or three others, but I don't know their names. Privates Lutz, Marine, and Galpin were up there. Then I called out for assistance, for a boat, the Ward Line boat. At that time Mr. Bronson was coming along in the whaleboat, and he called out "Courage." He says: "Help is coming."

Then I asked him for his painter, and I made it fast to one of the cradles that was remaining there, and I helped these others to get into the boat. I was going to get in myself, but Lutz called out "Give me some help here; there is two men dying." We managed to get them and throw them over. We had no way of putting them down. One was Erricson and the other was Smith. Smith fell in the water too far from the boat to receive assistance, and Mr. Bronson jumped out of the boat and swam to him. It was only a short distance, but the water appeared to be boiling up around there at the time. Then I got up from there and was intending to make the boat myself. I walked around the hammock netting a little, and I slipped and fell overboard. I got onto a chest, and I was picked up by a Spanish shore boat. We went all around the ship in the boat and picked up Rau, seaman, and Mike Malone, fireman, but Mike fell out of the boat afterwards; he was so badly hurt we couldn't hold him in. Then I was transferred to another Spanish boat, and we were taken ashore.

Q. You say at the first shock you were knocked down somewhere?

A. Yes, sir.

Q. Below?

A. Yes, sir.

Q. Where did you find yourself?

A. I thought I was on the berth deck.

Q. But you were not on the berth deck, were you?

A. I think not, sir.

Q. The next thing you found yourself on top of the middle superstructure?

A. Yes, sir.

Q. How did you get up there?

A. I can remember coming out of the after hatch, sir.

Q. You got on top?

A. On top, sir. I can remember all that was with me at the time down there. There was Williams, the armorer; he was sleeping on deck close to me; and Kane was standing with his arms on the ice chest. McGinnis, the marine, was sleeping on the port side.

Q. They were all saved?

A. They were all saved, sir, but the man that was sleeping in his hammock above, next to me, was lost.

Q. Who was that?

A. That was Calfield.

The JUDGE-ADVOCATE. These men, I want to say to the court, were mostly asleep. I have questioned most of the men he has mentioned, and they were asleep at the time.

By the COURT:

Q. You mentioned two explosions?

A. Two explosions, sir.

By the JUDGE-ADVOCATE:

Q. How far apart were the two explosions?

A. About a minute, as near as I can judge; that is, from the time the deck opened up until I heard the second explosion.

Q. By a minute you mean a very small period of time?

A. Very small.

Q. Very quick?

A. Very quick.

By the COURT:

Q. You do not mean a minute, then?

A. No, sir; it would hardly be a minute; but it happened a little after three bells, as near as I can judge, and I was ashore before four bells struck.

Q. Describe the two explosions.

A. One seemed to be a deafening report.

Q. Which one?

A. The one when the deck opened. Then, when I was down below, I imagined it was a boiler went up, on account of the water down there. It was hot, but the flame that I saw—the deck seemed to open. It was the same as if some one had taken a revolver and fired it close to your face, and you almost suffocated. It felt as if cotton was in our mouths when we were down below. We were choking down there, and we were drinking water as it was coming up on us, to try to get a little relief.

Q. Do you mean to say that you tried to get a drink of water during this time?

A. I was drinking the water as it was coming up on me, sir. As we were sinking, we were drinking water to get relief. This man Kane and myself were together nearly the whole time.

Q. Did you speak with each other?

A. Oh, yes, sir; we were speaking. I told him I had given up all hope once, and he told me he had given up all hope.

Q. Were the lights out at this time?

A. The lights were out as soon as the first flash. Everything was in darkness.

Q. Then you recognized these people how?

A. By their voices, sir.

Q. How did the second explosion differ from the first one?

A. It didn't seem to be as loud a report, to me, as the first one was.

Q. It did not seem to be as loud?

A. Not as loud, sir.

Q. The first thing you knew following the first report was that you were thrown down through the deck?

A. It seemed to me as if I fell through the deck instead of going up. The whole deck seemed to open. It sounded then as if a wagon with a lot of old iron had been dumped into a hole. That was the noise it was making, cracking up all the time.

The judge-advocate requested that the testimony given by the witness be not read to him by the stenographer, but that he be directed to report to-morrow morning at 10 o'clock, when he will be furnished with so much of the record as contains his testimony and asked to withdraw for the consideration of the same, upon the completion of which he will be again called before the court and be given an opportunity to amend his testimony as recorded, or pronounce it correct. The request was granted and the witness was instructed accordingly; whereupon he withdrew, after being cautioned by the president not to discuss matters pertaining to the inquiry.

Seaman PETER LARSEN, U. S. Navy, appeared as a witness before the court, and was duly sworn by the president.

Examined by the JUDGE-ADVOCATE:

Q. State your full name, rate, and to what ship you are attached.

A. My name is Peter Larsen; I was born in Norway; seaman; attached to the U. S. S. *Maine*.

Q. Were you on board the *Maine* on the night of her destruction?

A. Yes, sir.

Q. You were standing on the quarter-deck of the *Maine* at that time?

A. Yes, sir.

Q. Doing extra duty?

A. Extra duty; yes, sir.

Q. What part of the quarter-deck were you on?

A. Close to the after turret, sir.

By the COURT:

Q. It was not on the superstructure deck?

A. No, sir; just that little passage going between the after turret and the bulkhead.

Q. On the port side?

A. Yes, sir.

Q. Right near the gangway between the turret and the middle superstructure?

A. The galley door that leads out on the superstructure.

Q. Which way were you facing?

A. Port side, sir.

Q. What were you facing?

A. I just came walking up, like this, and I stopped there.

Q. Tell the court exactly what *you felt, heard*, and saw.

A. The first thing, *when I came off to that side* and was walking up

and down, I heard some explosion in the port gangway; something like an explosion. I just turned around, and then the big explosion came, and I got thrown aft on the poop.

Q. What do you mean by the first explosion? What did it sound like?

A. Something like a shot, sir.

Q. What did it feel like?

A. It jarred the ship.

Q. Did you see any flame or anything?

A. Yes, sir; just around the corner came the flame.

Q. Show us on the plan where you were.

A. Right here [pointing between the turret and the galley]. The first noise I heard was around the port gangway, where the ice machine is.

Q. The first what?

A. The first explosion, and the next thing I got thrown up here on the poop deck.

Q. You got thrown up there?

A. Yes, sir.

Q. On top of the deck?

A. Yes, sir.

Q. You did not walk up there at all?

A. No, sir.

Q. You were thrown up there?

A. Yes, sir.

Q. You saw the light around this corner?

A. Just coming around this corner; and the next thing I found myself up there.

Q. Were you hurt?

A. No, sir; just across the back a little, and my arm.

By the JUDGE-ADVOCATE:

Q. What kind of a sensation did the second explosion make in regard to the ship?

A. At the second explosion I got thrown away, and everything around me was flying.

Q. Was there a distinct interval between the two, do you think?

A. There was a very little between each other, because I didn't have time to turn around, because I got thrown out.

Q. They were distinct, in your opinion?

A. Yes, sir; they were distinct.

Q. When did you see the flames—after the first and before the second?

A. No, sir; just with the second.

Q. It was the second shot, then, that threw you up on the poop deck?

A. Yes, sir; the second shot, because at the first I had just turned around. The second took me away from the quarter-deck altogether.

Q. Can you describe any more carefully the first shock?

A. No, sir; it was just a jar, shaking all over.

Q. It did not throw you off your feet?

A. No, sir; it didn't throw me off my feet. It was something like the ship had gone aground. She was shaking.

Q. How long do you think it was after the first shock before the second one?

A. I don't think there was more than about two seconds, or something like that.

Q. A very short time?

A. Yes, sir.

Q. The two were perfectly separate?
A. Yes, sir.

The judge-advocate requested that the testimony given by the witness be not read to him by the stenographer, but that he be directed to report to-morrow morning at 10 o'clock, when he will be furnished with so much of the record as contains his testimony and asked to withdraw for the consideration of the same, upon the completion of which he will be again called before the court and be given an opportunity to amend his testimony as recorded or pronounce it correct. The request was granted, and the witness was instructed accordingly; whereupon he withdrew, after being cautioned by the president not to discuss matters pertaining to the inquiry.

Seaman LOUIS MORINIERE, U. S. Navy, appeared as a witness before the court, and was duly sworn by the president:

Examined by the JUDGE-ADVOCATE:

Q. Give your full name.
A. Louis Moriniere.
Q. What rate?
A. Seaman.
Q. Attached to the *Maine?*
A. Yes, sir.
Q. Were you on board the *Maine* at the time of her destruction?
A. Yes, sir.
Q. You were on the quarter-deck, I believe?
A. Yes, sir.
Q. On the main deck?
A. Yes, sir.
Q. Whereabouts?
A. Between the after superstructure and the main superstructure; abreast the after turret, sir.
Q. About halfway between the two superstructures?
A. Yes, sir; closer to the after superstructure.
Q. Near the barbette?
A. No, sir; near that reel there that the fire hose is on, under the ladder; close to the ladder.
Q. That is not the after superstructure. That is the middle superstructure. You were close to the ladder leading up the middle superstructure. I will show it to you on the plan. Which way were you facing at the time the trouble commenced?
A. Aft, sir.
Q. Tell the court exactly what you felt, what you heard, and what you saw; not what you have been told since—what you remember yourself feeling.
A. I heard a jar, and after this jar the explosion went up through the middle superstructure. I heard a jar first, and almost at the same time of this jar the whole middle superstructure went up in fire, sir. I was thrown up off my feet and sent aft against my will, and I fell on all fours.
Q. You were thrown down?
A. Yes, sir; I looked forward and saw no more smokestacks. The smokestacks were done.
Q. They had gone?
A. Yes, sir; the two smokestacks were gone.
Q. That was after you picked *yourself up?*

A. Yes, sir; I got hold of an awning stanchion and crawled up something around there; I don't know what it was. I looked aro and I couldn't see no smokestacks.

Q. What did the first explosion feel like to you?

A. Just a jar, sir.

Q. How long was it between that and the second explosion?

A. It was hardly two seconds.

Q. When did you see flame?

A. The flame was in the port gangway.

Q. When did that first come?

A. Just soon after this second explosion started.

Q. Which knocked you down?

A. It was the second explosion.

Q. How far aft were you thrown?

A. Just about fifteen feet, in my judgment.

Q. You landed on your hands and knees?

A. Yes, sir; I couldn't get on my feet again.

Q. You could not get your feet again?

A. No, sir; I couldn't get on my feet. There was so much vibra in the deck that I couldn't stand up. When I got up in the boat al side the ship, after the captain left the ship, we saw the berth dec fire through the ports.

Q. That was after you had left the ship?

A. Yes, sir. She was very deep down in the water then. She almost level with the ports.

The judge-advocate requested that the testimony given by the ness be not read to him by the stenographer, but that he be dire to report to-morrow morning at 10 o'clock, when he will be furni with so much of the record as contains his testimony and aske withdraw for the consideration of the same, upon the completic which he will be again called before the court and be given an op tunity to amend his testimony as recorded, or pronounce it cor The request was granted, and the witness was instructed accordin whereupon he withdrew, after being cautioned by the president no discuss matters pertaining to the inquiry.

Boatswain's Mate CHARLES BERGMAN, U. S. Navy, appeared witness before the court, and was duly sworn by the president.

Examined by the JUDGE-ADVOCATE:

Q. Give your full name, rate, and to what ship you are attached

A. Charles Bergman; boatswain's mate; first-class; U. S. S. *M*

Q. Were you on board the *Maine* on the night of her destructio

A. Yes, sir.

Q. Were you asleep when it happened?

A. I was just between waking and sleeping.

Q. Just going to sleep?

A. Yes, sir.

Q. Were you in your hammock?

A. Yes, sir.

Q. Where was your hammock swung?

A. Forward on the berth deck, in the forward compartment.

Q. Which side?

A. The starboard side.

Q. Near the brig?

A. On the afterpart of the starboard brig.

Q. The hammock swung fore and aft?

A. Yes, sir.

Q. Well outboard?

A. Yes, sir; the first hammock outboard, alongside the mess locker. I swung on top from the hooks, and two others were swinging underneath.

Q. What were the other men's names?

A. Atkin and Fountain.

Q. They were both killed?

A. Yes, sir.

Q. Tell us what you felt and what you experienced. Which way was your head?

A. Aft, sir.

Q. Tell us what you felt—what you experienced.

A. I heard a terrible crash, an explosion I suppose that was. Something fell, and then after that I got thrown somewhere in a hot place. Wherever that was I don't know. I got burned on my legs and arms, and I got my mouth full of ashes and one thing and another. Then the next thing I was in the water—away under the water somewhere, with a lot of wreckage on top of me that was sinking me down. After I got clear of that I started to come up to the surface of the water again, and I got afoul of some other wreckage. I got my head jammed in, and I couldn't get loose, so I let myself go down. Then it carried me down farther. I suppose when it touched the bottom somewhere it sort of opened out a bit, and I got my head out and started for the surface of the water again. I hit a lot of other stuff with my head, and then I got my head above the water. I got picked up by a Spanish boat, one of these shore boats, I think.

Q. When you found yourself in the water first, how far were you from this ship?

A. I must have been underneath the ship, as far as I can make out. At least, I come up on the side.

Q. Near the ship?

A. Yes, sir. I got out through the bottom or the side, as near as I can make out.

Q. You were the only man in that compartment that was saved?

A. Yes, sir; the only man from the whole berth deck except Jerry Shea, I believe.

Q. Where was he?

A. He was in the fireman's compartment, I believe, forward of the marines' compartment.

Q. Where is Shea now?

A. He is in the hospital at Havana, I think. I don't know of no other one. When I come up, she was all settled down in the water. She was all torn to pieces then, and settled down.

Q. Had you swallowed much water?

A. I was full of it. I was pretty near drowned when I came up. When I got in the boat the water was running out of me. I must have been under there for a couple of minutes, as far as I can make out.

By the COURT:

Q. Do you remember more than one shock?

A. That is all, sir; one terrible crash. That is all I know about.

Q. You say you went which way; what became of you?

A. That I couldn't say. I must have got out from the bottom or the side. That is what I think. *I don't know which* way I got thrown

or fired. It was something fearful. There is nothing to compare with it at all.

Q. You were not conscious of having your head above water from the start until you were picked up? You did not know during that time that your head had been above water at all?

A. No, sir; I was under all the time. After I once got my head above water I had it there all the time.

Q. You say your legs and arms were burned?

A. Yes, sir.

Q. Those are the burns on your hands now, are they?

A. Yes, sir; and that leg and arm [indicating his left leg and left arm].

Q. How large spaces were burned?

A. It is burned across this leg here [indicating]. My arm is pretty well healed up now. There was a big, raw burn on my left elbow.

Q. You say at one time you felt you were in a very hot place?

A. Yes, sir.

Q. Do you mean that it was hot air, hot gases?

A. It must have been hot iron or something, I guess, that I fell against. I got a lot of ashes in my mouth and face. I know that.

The judge-advocate requested that the testimony given by the witness be not read to him by the stenographer, but that he be directed to report to-morrow morning at 10 o'clock, when he will be furnished with so much of the record as contains his testimony and asked to withdraw for the consideration of the same, upon the completion of which he will be again called before the court and be given an opportunity to amend his testimony as recorded, or pronounce it correct. The request was granted and the witness was instructed accordingly; whereupon he withdrew, after being cautioned by the president not to discuss matters pertaining to the inquiry.

Gunner HILL here entered the court.

The JUDGE-ADVOCATE. Mr. Hill, have you read over your testimony of yesterday?

A. Yes, sir.

Q. Is it correct as recorded?

A. I wish to make a few changes. On page 315, in the fourth answer, strike out the word "yes" and insert "no."

In the fifth answer, add to the answer "I can remember no upright in the after end of the magazine except those in the center forming the two fore and aft bins."

Q. Is your testimony as amended correct?

A. Yes, sir.

The witness then withdrew, after being cautioned by the president not to converse about matters pertaining to the inquiry.

The court then (at 12.40 p. m.) took a recess until 2 p. m.

The court reassembled at the expiration of the recess.

Present: All the members of the court, the judge-advocate, and the stenographer.

Landsman GEORGE FOX, U. S. Navy, appeared as a witness before the court, and was duly sworn by the president.

Examined by the JUDGE-ADVOCATE:

Q. State your full name, rate, and to what ship you are attached?

A. George Fox, landsman, U. S. Navy, attached to the U. S. S. *Maine*.
Q. Were you on board the *Maine* at the time of her destruction?
A. Yes, sir.
Q. I believe you were a lamplighter?
A. Yes, sir.
Q. Where were you at the time it happened?
A. In the lamp room, sir.
Q. Where is that lamp room situated?
A. On the port side of the superstructure forward.
Q. The middle superstructure?
A. The middle superstructure.
Q. Is it inside the 6-inch gun rest?
A. Yes, sir; right under the port 6-inch gun.
Q. Were you in there in your hammock?
A. No, sir; I had a bunk rigged up in there.
Q. Was the door locked?
A. Yes, sir.
Q. In what way was the door locked?
A. I had a catch and a hook, just a kind of a hook. I don't know how to explain it. It was caught over a port.
Q. Were you asleep when this commenced?
A. I was just dozing off.
Q. Tell us what happened to you.
A. As well as I can remember I was thrown up in the air and I came down feet first. I heard the rattling and the roar around me, but it was pitch dark and I couldn't see nothing. I had to feel around. I heard the men groaning around me. I felt a hole and I crawled through that. Then I seen the wreck burning on top, and that gave me light to see to climb up. I found myself in the middle of the wreck, pretty high up, because I could look down and see the boats all around there. Then I went down to the water's edge and swam out to a boat.
Q. Did the lamp room seem to be upside down?
A. Yes, sir; it seemed to be pretty well demolished, as well as I could make out.
Q. Was it perfectly open on the outside for you to crawl out?
A. No, sir; I had to crawl through a pretty small hole. It scratched me all here [indicating].
Q. Did you feel any particular shock except this upheaving?
A. No, sir; I was dazed for a minute. I was stunned.
Q. You were dazed at the very first shock?
A. Yes, sir; but I realized that we had been blown up some way. There was a strong smell of powder there somewhere that nearly gagged me. It was some kind of explosive that smelled like powder, and also the burning of cotton. I don't know what it was or what made it.

By the COURT:

Q. Of cotton?
A. Yes, sir; it smelled like burning cloth of some kind.
Q. Were your own clothes burned?
A. No, sir; not as I know of. I was stripped, myself. Of course my bedding might have taken fire; I don't know. Anyway, that smoke seemed to come from below somewhere.
Q. Do you mean that you were stripped?
A. Yes, sir; I was naked, myself. I didn't have a stitch on me, it being very warm there.
Q. Did you go to bed that way?

A. Yes, sir; I went to bed that way.

Q. You heard but one explosion?

A. Yes, sir; but one explosion.

Q. When you came down to the water's edge to swim out into tl water, which side of the ship were you on?

A. I was on the port side, sir. I am sure of that, sir, because I se Mr. Boyd on top of the wreck. He called out to all hands to turn and fight the fire. He said we had settled down. That is the fir thing I heard when I came on top of the wreck, and I went down the water's edge and swam out to one of these boats.

Q. You are sure that was on the port side?

A. Yes, sir; I am certain of that.

The judge-advocate requested that the testimony given by the witne be not read to him by the stenographer, but that he be directed to r port to-morrow morning at 10 o'clock, when he will be furnished wi so much of the record as contains his testimony, and asked to withdrs for the consideration of the same, upon the completion of which he w be again called before the court and be given an opportunity to amei his testimony as recorded, or pronounce it correct. The request w granted, and the witness was instructed accordingly; whereupon l withdrew, after being cautioned by the president not to discuss matte pertaining to the inquiry.

Landsman MICHAEL LANAHAN, U. S. Navy, appeared as a witne before the court, and was duly sworn by the president.

Examined by the JUDGE-ADVOCATE:

Q. State your full name, your rate, and the ship to which you a attached.

A. My name is Michael Lanahan; landsman; U. S. S. *Maine.*

Q. Were you on board the *Maine* at the time of her destruction?

A. Yes, sir.

Q. Where were you?

A. I was in my hammock, over the starboard 6-inch gun, in the for castle.

Q. Over the starboard 6-inch forecastle gun?

A. Yes, sir; my foot was over the starboard 6-inch gun, and my hes was aft.

Q. Inside the forward superstructure?

A. Yes, sir.

Q. What happened to you? Were you asleep when it started?

A. No, sir; I wasn't asleep. I was just turning into my hammoc I was about to lie down in my hammock when I felt a jar, and that all I remember.

Q. Where did you find yourself?

A. I found myself about 50 feet from the ship, out in the water.

Q. On which side?

A. On the starboard side.

Q. Were you injured?

A. No, sir; I had a slight cut in my head.

Q. Was anyone else in that superstructure saved?

A. Yes, sir.

Q. Who?

A. Michael Flynn, Durkin, Bloomer, and a young fellow—I forget hi name. He is out in the hospital. He was a new fellow that had ju *come. There* was four or five of them came out of that first part.

Q. You do not remember anything at all until you landed in the water?

A. No, sir; I didn't know anything at all about it until I came up in the water.

Q. Some distance from the ship?

A. Yes, sir; about 50 feet out in the water.

Q. To starboard?

A. To starboard; yes, sir.

Q. What did you feel in the way of shocks or explosions?

A. I just felt a jar, and that was all—just a trembling, and that is the last I remember of it.

By the COURT:

Q. You did not hear any noise?

A. No, sir; I did not hear any noise; just a trembling, and everything seemed dumb then. When I came up out of the water, I realized what had happened, and I swam for a buoy.

Q. Swam for what?

A. One of those small buoys that are anchored there.

Q. The door into that superstructure was abaft your head, was it not?

A. Yes, sir; just abaft of the gun.

Q. You do not know whether you went through the deck or through the side?

A. No, sir; I went right straight up and went out. The deck must have been blown up. If it hadn't, I would have been hurt worse than I was. I couldn't make any statement about that. I know I went up through it.

Q. Were you burned at all?

A. No, sir; I wasn't burned. I was just cut in the head; that was all.

The judge-advocate requested that the testimony given by the witness be not read to him by the stenographer, but that he be directed to report to-morrow morning at 10 o'clock, when he will be furnished with so much of the record as contains his testimony and asked to withdraw for the consideration of the same, upon the completion of which he will be again called before the court and be given an opportunity to amend his testimony as recorded, or pronounce it correct. The request was granted and the witness was instructed accordingly; whereupon he withdrew, after being cautioned by the president not to discuss matters pertaining to the inquiry.

Coal Passer THOMAS MELVILLE, U. S. Navy, appeared as a witness before the court, and was duly sworn by the president:

Examined by the JUDGE ADVOCATE:

Q. State your full name, rank, and to what ship you are attached.

A. Thomas Melville, coal passer, U. S. S. *Maine*.

Q. I believe you were on the quarter-deck of the *Maine* at the time of her destruction?

A. Yes, sir.

Q. What part of the deck were you on?

A. Just right between the after turret and the bulkhead of the galley.

Q. In that passageway?

A. Yes, sir.

Q. Which way *were you facing?*

A. With my back turned to it, sir, and my face toward aft.

Q. Were you standing near Larsen?

A. Yes, sir.

Q. Tell the court exactly what you felt, heard, and saw.

A. I felt something like electrician right under my feet.

Q. You felt what?

A. Something that appeared to me like electrician—a loud report—just about amidships.

Q. An electric shock, I suppose you mean?

A. Yes, sir; and she listed over on the port side. The port was under water. Her starboard side was up. I made my way to the starboard gangway, and then I heard the second report. I had an idea that was the boilers, from the ashes and soot and stuff. I tried to make my way amidships on the starboard gangway, and I got hit with ashes. I had an idea it was the boilers had exploded. That opened up the superstructure and carried everything forward. By that time I made my way aft for the second whaleboat. Before me and a man by the name of McCann could reach her she was under water. I came back again to the starboard gangway, when the captain's gig came along aft with the boatswain in her. He hollered for me and McCann to come to him. We dove overboard and swam for the cutter and manned her to save lives, which we couldn't. Then the captain's writer—I don't know what you call him; I guess it was the writer—hollered for us to come back. We came back and stood there, and the first lieutenant and the captain got in the gig. The captain gave orders to shove off and for all boats to leave her, to look out for the magazines. That was the captain's orders. We went around her a couple of times and looked for lives, but couldn't find any. Then we rowed to the *City of Washington*, at the captain's order, with all the men we had in the boat.

Q. When you felt the first shock, were you knocked off your feet?

A. No, sir.

Q. How long was it before the explosion, which you call a boiler explosion, occurred after the first shock?

A. It appeared to me about a half a minute between the two explosions.

Q. Almost immediately, do you think? Half a minute, you know, is quite a little space.

A. The first explosion raised up part of the superstructure, etc., and twisted it right over my head, and the awning came down over my head. I made under it for the starboard gangway. When I got to the starboard gangway the second explosion occurred.

Q. Did the ship shake as much after the second explosion as after the first?

A. No, sir; I think it shook more at the first.

Q. How was the sound?

A. It appeared to me, when she was hit starboard, it came about amidships, and then turned and everything went forward.

Q. Did you see any flame?

A. Not before the second explosion. The first explosion appeared to be right under the berth deck.

Q. Did the ship seem to lift any at the first explosion?

A. No, sir.

Q. She just trembled?

A. She trembled, and the port side went down just as she was struck.

By the COURT:

Q. You say that this second explosion threw everything forward?

A. It threw everything forward, sir. That is what it appeared to me—that it opened up the superstructure, and the second explosion carried the ironwork out and struck the steam launch, made fast to the guess warp of the starboard side. I seen that myself.

Q. You saw what?

A. I saw when the steam launch went down, from the ironwork of the superstructure, at the second explosion.

Q. What seemed to be the cause of the steam launch going down?

A. The ironwork tipped her over like, and everything went right on to her—smothered her right up. It appeared to me that way. There was a good deal of iron blown out from her. Our two boilers was going forward down below. That is what made me think it was so long, half a minute or so, between the two explosions. There was no boilers going aft. We had two going forward.

Q. You had two boilers going forward?

A. Yes, sir; I knew that myself, and we had four primed ready to steam at the time.

Q. You are wrong. The after boilers were in use?

A. Yes, sir; the two after boilers. I know the steam launch was lying there at the second explosion. I am sure of that.

Q. What was the name of the man who was standing in that passage-way between the turret and the galley with you?

A. Pete Larsen.

Q. Where did he go; what did he do?

A. I couldn't tell you, sir. I didn't see him at all.

Q. You did not see him afterwards?

A. No, sir.

Q. Larsen simply went overboard?

A. He disappeared from me, sir. I couldn't say how he disappeared. Of course the shock took all the life out of me for a second—for half a second. When I came to myself, I knew where the starboard gangway was, and I made for it. When I got there I found a fellow by the name of Gartrell praying, and one fellow by the name of Lancaster, he was dead, and another fellow was holding on the gangway. I pulled him out of the water, and saw that he was dead, and I left him there.

Q. You are sure that the ship listed after the first explosion?

A. Oh, yes, sir; the port gangway went under water in two seconds, right after she was hit. She went down so quick that when I got to the starboard gangway it was away up. The gangway was clean out of water.

Q. The second explosion had not occurred at that time?

A. No, sir; not before I reached the starboard side.

Q. Were you standing up at the time of the first shock?

A. Yes, sir; me and this man by the name of McCann and Wilber, coxswain of the steam launch, we tried to make for the second whale-boat. We did make it, and we seen it was under water, and couldn't do anything with it. So we came back to the gangway again, and by that time Wilber fell overboard. He disappeared, and he told us afterwards in the hospital that he fell overboard. The boatswain holloed for me and McCann, and we dove overboard and swam to the captain's gig.

The judge-advocate requested that the testimony given by the witness be not read to him by the stenographer, but that he be directed to report to-morrow morning at 10 o'clock, when he will be furnished with so much of the record as contains his testimony, and asked to withdraw for the consideration *of the same*, upon the completion of

which he will be again called before the court and be given an opportunity to amend his testimony as recorded or pronounce it correct. The request was granted, and the witness was instructed accordingly; whereupon he withdrew, after being cautioned by the president not to discuss matters pertaining to the inquiry.

Coxswain BENJAMIN R. WILBER, U. S. Navy, appeared as a witness before the court, and was duly sworn by the president.

Examined by the JUDGE-ADVOCATE:

Q. State your full name, your rate, and the ship to which you are attached.

A. Benjamin R. Wilber; coxswain; U. S. S. *Maine*.

Q. Were you on board the *Maine* at the time of her destruction?

A. Yes, sir; not on the *Maine*. I was in the steam launch alongside the ship.

Q. Where was the steam launch?

A. On the starboard boom, sir.

Q. Did you have steam up?

A. Steam up; yes, sir.

Q. Hanging to what; a guess warp?

A. No, sir; made fast to the Jacob's ladder, and the stern hauled aft to the grab rope, so that she couldn't swing and catch the smokestack.

Q. Who were in the boat with you?

A. There was five of us—Pank, Lowman, Nicholson, and Rau—five men with myself.

Q. Are any of those men alive now?

A. All of them are alive; yes, sir.

Q. Were you awake when it happened?

A. Yes, sir.

Q. What part of the boat were you in?

A. In the stern sheets, sir.

Q. Tell the court what happened.

A. What I know of it; it seemed to me as if something hit me in the face, and I didn't know any more until I came up under the water, some distance from the ship, when I came up close to one of our coaling booms or strong back. I don't know what it was. Pank, one of the men in the boat, was on it. I don't know how long I stayed there, but then I happened to think of the sharks that was in the water around there, and I swam to the ship, to the starboard gangway. I took off my clothes and shoes and jumped overboard again, and swam to the Spanish cutter that was pretty close to the ship then, and they took me on board the Spanish man-of-war that was lying there.

Q. You do not know how you got out of the launch?

A. No, sir; I don't remember one single thing. I don't know what became of the boat either.

Q. Did you see any flame?

A. Just like a flash it hit me in the face. I didn't see any flame.

Q. You were immediately knocked senseless?

A. Yes, sir; I think I was knocked senseless.

Q. How far were you from the ship when you found yourself in the water?

A. I can't exactly say. I should say about 20 yards, or something like that.

Q. Which way from the ship?

A. Right directly out—right broadside off from the ship.

Q. You were some distance from where the launch had been?
A. Yes, sir.

By the COURT:

Q. You heard no explosion; you heard nothing?
A. No, sir; I didn't hear nothing.

By the JUDGE-ADVOCATE:

Q. How were you injured?
A. I was struck on the side of the head here by something.
Q. The right side of your face?
A. Yes, right here.
Q. Around the temple?
A. Yes, sir; and I think it has injured the jawbone. I don't know. I can't open my mouth. I can't hear in the left ear, and I am cut on the right arm below the elbow.

The judge-advocate requested that the testimony given by the witness be not read to him by the stenographer, but that he be directed to report to-morrow morning at 10 o'clock, when he will be furnished with so much of the record as contains his testimony, and asked to withdraw for the consideration of the same, upon the completion of which he will be again called before the court and be given an opportunity to amend his testimony as recorded or pronounce it correct. The request was granted, and the witness was instructed accordingly; whereupon he withdrew, after being cautioned by the president not to discuss matters pertaining to the inquiry.

Fireman JOHN H. PANK, U. S. Navy, appeared as a witness before the court, and was duly sworn by the president.

Examined by the JUDGE-ADVOCATE:

Q. State your full name, rate, and the ship to which you are attached.
A. John Henry Pank; fireman, first-class; U. S. S. *Maine*.
Q. Were you the fireman that ran the first steam launch?
A. Yes, sir.
Q. Were you in that launch at the time of her destruction?
A. Yes, sir.
Q. What part of that boat were you in?
A. I was amidships, near the engine room.
Q. Between the boiler and the stern sheets?
A. Yes, sir.
Q. On which side of the boat?
A. On the port side.
Q. Which way were you looking when this thing happened?
A. I was looking out to starboard.
Q. Away from the ship?
A. Yes, sir.
Q. Tell the court what happened to you?
A. All I can say, sir, is that I heard a big explosion, and I was just about to look around to see where it came from, when something must have struck the steam launch on the port side. It just capsized her right over. It taken us about 25 or 30 feet under the water before we could get out. By the time we got up it was all over. We landed about 30 yards from the ship. That is about all I can say, sir.
Q. You heard an explosion on board the ship?
A. Yes, sir.
Q. One or two?

A. I only heard one, sir.
Q. You felt the boat going over?
A. Yes, sir.
Q. You were not blown out of the boat?
A. No, sir.
Q. You scrambled out as the boat turned over?
A. Yes, sir.
Q. What is the matter with your arm?
A. I lost two of the fingers.
Q. How do you suppose that happened?
A. I don't know, sir; unless it was because we had a pretty good fire in the boilers at the time—we had about 160 pounds of steam—and I can't account for it no other way except that when the boiler struck the water, the boiler was so hot at the time it must have exploded.
Q. You were knocked senseless?
A. No, sir; I wasn't knocked senseless at all. The only place I was hurt was on the hand, and I felt that just as I started to come up.
Q. Did you turn toward the ship when you heard the explosion?
A. Yes, sir.
Q. Did you see any flame shoot up?
A. No, sir; I didn't see anything at all.
Q. I suppose the boat was between you and the ship when she was turning over?
A. Yes, sir.
Q. You are sure the boat keeled over and went down that way?
A. Yes, sir; I am certain of that.

By the COURT:

Q. Were you carried down in the boat?
A. Yes, sir; in the boat.
Q. Did the boat turn over toward the ship or from the ship?
A. From the ship, sir.
Q. You say you think the boat must have been struck by something which keeled her over?
A. Yes, sir; something struck her on the starboard side and just keeled her right over.
Q. Was that any of the flying débris? Was it a piece of metal, or was there anything about it that would enable you to form a conclusion as to what it was struck her?
A. No, sir; I couldn't tell what it was struck her.
Q. You do not know whether it was a wave or the water disturbed by the explosion, or whether it was a piece of the débris?
A. No, sir.

There being no further questions to ask this witness, on account of his crippled condition his testimony was read over to him by the stenographer, and by him pronounced correct.

The witness then withdrew, after being cautioned by the president not to converse about matters pertaining to the inquiry.

Seaman OTTO RAU, U. S. Navy, appeared as a witness before the court and was duly sworn by the president.

Examined by the JUDGE-ADVOCATE:

Q. State your name, rate, and the ship to which you are attached.
A. Otto Rau, seaman, U. S. S. *Maine*.
Q. You were in the steam launch at the time of her destruction?

A. Yes, sir.
Q. Were you awake?
A. Yes, sir.
Q. What part of the boat were you in?
A. I was standing right in front of the boilers.
Q. Forward of the boilers?
A. In front of the boilers; yes, sir. I had scrubbed the tape with my shirt and put it on top of the boiler, and at that minute I felt the pressure. I don't know which way I went out of the launch. I only know that I next felt myself coming up from the water. Three times I struck myself against things, and could not come right on top of the water. After I did come on top of the water, I was a good distance from the ship, close up to Nicholson. He cried for help, and so did I, and we got picked up by a boat.
Q. How far do you suppose you came up from where the wreckage originally was?
A. I don't know exactly how far. It was a good distance.
Q. How many explosions did you hear?
A. I can't remember. I didn't hear none at all.
Q. You do not know anything about it?
A. No, sir. I thought at first it was a boiler from the steam launch that had exploded, and after I came on top of the water I took a look around and seen the ship burning.

The judge-advocate requested that the testimony given by the witness be not read to him by the stenographer, but that he be directed to report to-morrow morning at 10 o'clock, when he will be furnished with so much of the record as contains his testimony and asked to withdraw for the consideration of the same, upon the completion of which he will be again called before the court and be given an opportunity to amend his testimony as recorded, or pronounce it correct. The request was granted, and the witness was instructed accordingly; whereupon he withdrew, after being cautioned by the president not to discuss matters pertaining to the inquiry.

Fireman WILLIAM GARTRELL, U. S. Navy, appeared as a witness before the court, and was duly sworn by the president.

Examined by the JUDGE-ADVOCATE:

Q. State your full name, rate, and to what ship you are attached.
A. William Gartrell, born in Washington. I am a first-class fireman by rate; attached to the U. S. S. *Maine*.
Q. Were you on board the *Maine* at the time of her destruction?
A. Yes, sir.
Q. Where were you?
A. I were right down at the magazine, on top of the magazine, when it happened; at the tiller room, right by the storeroom. I was lying down at the time.
Q. You were lying down in the tiller room?
A. Yes, sir; I had just laid down. It wasn't a second. I had no sooner laid down, than it happened.
Q. You were right in front of the storeroom door?
A. No, sir; that is a torpedo on the edge of the storeroom. It was back of that, where the gunners keep their storeroom.
Q. About abreast of the three wheels?
A. Yes, sir.
Q. On which side?

A. On the port side.

Q. You were on the port side, abreast of the three wheels?

A. On the port side; yes, sir.

Q. You were in the steering room, then?

A. Yes, sir.

Q. In the steam steering engine room?

A. Yes, sir.

Q. Not in the tiller room.

A. You know, there are two magazines.

Q. You were right by the three wheels?

A. Yes, sir; I were lying right in here, sir [indicating]. There is a hatch there.

Q. On the starboard side or the port side?

A. On the port side the hatches are. I was lying right on that hatch. I had a mattress there.

Q. You were in the steam steering room?

A. Yes, sir.

Q. The tiller room is abaft that?

A. Yes, sir.

Q. Tell the court exactly what you felt, and heard, and saw.

A. Just a second before that Bushford, chief machinist, came to me and asked me for the loan of the keys to go in the storeroom. He said he was restless and couldn't sleep. I gave him the keys and told him to put the keys near my shoes, that I was going to sleep there that night. I laid there. I had a book in my hand and was going to read. Just then Charley Quinn, an oiler, that was on watch, came up and said: "We want some oil." I said: "It is funny there is no oil out," and everything like that; but I gave him the key and he got the oil and throwed the key back. Then I walked back and laid down and went to sleep. Frank Gardiner, coal passer, was lying down beside of me. Just as soon as I laid down, I was talking to him and I hadn't spoke three words. He was telling me his time was out in May, and I said mine was out in June, and he made the remark that he was going to wait for me—all like that, just fooling, and just then a flash came. It was a blue flash. It seemed to me like it was right by the lamp in the engine room. I could see as plain as day.

Q. How could you see into the engine room?

A. I could see through the door, sir. It was a kind of a blue flame, and it came all at once. The two of us jumped up, and I went on the port side up the engine-room ladder, and Frank Gardiner, he went up the starboard side—at least he didn't go up, because he hollered to me. He struck the door right there where the partition separates the two doors, and he must have struck his head. He hollered to me; he says: "O Jesus, Billy, I am gone." I didn't stop then, because the water was then up to my knees. I made a break as quick as I could up the ladder, and when I got up the ladder into the steerage room the ladder was gone. Everything was dark. I couldn't see nothing; everything was pitch dark, and I gave up, or I started to give up. There was a colored fellow with me; I didn't know his name until afterwards. His name was Harris. We got hold of each other. I says: "Let's give up; there is no hope." I started in to say a prayer the best I knew how, and I heard a voice. It must have been an officer; it couldn't have been a man's voice, because he says: "There is hope, men." I knew from that that he was an officer. After that I seen a little light. It looked like an awful distance from me, but I made for that light, and when I got there it seemed like I could see the heavens. I got jammed in the ladder. My head was right up against the deck. I seen the

ladder, and I caught hold of Harris, and the two of us hugged each other.

Q. You got hold of who?

A. The ladder was hung crossways on top. There wasn't no ladder that we could walk up. The ladder was up above us, and we got jammed in the ladder, the two of us. I don't know whether I got out first or this colored fellow, but when I did get out I tried to say a prayer. I looked where I was and I saw the heavens and everything, and I tried to say a prayer or something, and I fainted away. I felt someone picking me up and they throwed me overboard.

Q. When you saw this blue flame in the engine room, did you feel any shock to the ship?

A. Yes, sir; she was going like this all the time [indicating].

Q. The ship was?

A. Yes, sir.

Q. How long did that last?

A. It lasted until I got up to the top of the ladder. Then I was in the water.

Q. You only felt one continuous shaking?

A. Yes, sir.

Q. Did you hear any noise, any report?

A. Yes, sir; I heard a terrible report.

Q. How did it sound; like a gun?

A. No, sir; it wasn't a gun. I couldn't hardly tell you how it sounded—like the whole earth had opened up.

By the COURT:

Q. There was but one shock—one continuous shock?

A. I don't know. It seemed like it was just the roaring of the ship, and then the shock came.

Q. You felt the ship tremble before this explosion?

A. Before this explosion; yes, sir.

Q. You were right in the bottom of the ship?

A. Yes, sir.

Q. Did you say you were lying on your hammock?

A. On the mattress, on the after magazine on the port side, right in the engineers' storeroom. As you come out of the door and right down about 8 or 9 feet, I think, there are these magazine hatches. I had my mattress there. Frank Gardiner, coal passer, he was lying this way, just between the wheels, with his mattress.

The judge-advocate requested that the testimony given by the witness be not read to him by the stenographer, but that he be directed to report to-morrow morning at 10 o'clock, when he will be furnished with so much of the record as contains his testimony and asked to withdraw for the consideration of the same, upon the completion of which he will be again called before the court and be given an opportunity to amend his testimony as recorded, or pronounce it correct. The request was granted and the witness was instructed accordingly; whereupon he withdrew, after being cautioned by the president not to discuss matters pertaining to the inquiry.

Seaman EDWARD MATTSON, U. S. Navy, appeared as a witness before the court, and was duly sworn by the president.

Examined by the JUDGE-ADVOCATE:

Q. State your full name, rate, and to what ship you are attached.

A. My name is Edward Mattson; ordinary seaman; attached to the U. S. S. *Maine.*

Q. You were on anchor watch at the time the *Maine* was destroyed?

A. We were standing quarter watches, and I had the messenger watch.

Q. You were wide awake at the time it happened, were you?

A. Yes, sir; I and another fellow was walking up in the starboard gangway.

Q. Will you tell the court exactly where you were when you felt the first shock?

A. I was right abreast of the starboard crane.

Q. In the starboard gangway?

A. Yes, sir.

Q. Facing which way?

A. Facing forward.

Q. Then state exactly what you felt, and heard, and saw.

A. It was just the same as if I seen lots of smoke, and I went right up in the air. I don't know where I went to. After that I didn't remember until I was lying aft on the quarter-deck.

Q. What part of the quarter-deck?

A. I was lying right by the smokestack, and when I come to my senses I slid down on the quarter-deck.

Q. When the ship shook were you knocked off your feet immediately?

A. Yes, sir.

Q. At the very first shock?

A. Yes, sir.

Q. Did you see any fire flying up in the air?

A. No, sir; I didn't see anything else but smoke.

Q. You only felt one shock?

A. Yes, sir.

Q. And that landed you aft on the quarter-deck?

A. Yes, sir.

Q. Are you sure you went up in the air?

A. Yes, sir; I didn't strike the water. I must have gone in the air.

By the COURT:

Q. You say you felt but one shock?

A. One shock; that is all, sir.

Q. You were walking up and down the gangway?

A. Yes, sir.

Q. You were facing downward?

A. Yes, sir.

Q. Then you were thrown backward, were you?

A. Backward on the quarter deck.

Q. How did you fall?

A. I suppose I fell on my shoulder, for I felt kind of sore there [indicating left shoulder].

Q. Did you say you were alongside of the smokestack?

A. Yes, sir; by the smokestack, just where the third cutter was standing.

Q. You said you were by the crane, did you not?

A. Yes; abreast of the starboard crane.

The judge-advocate requested that the testimony given by the witness be not read to him by the stenographer, but that he be directed to report to-morrow morning at 10 o'clock, when he will be furnished with so much of the record as contains his testimony and asked to withdraw for the consideration of the same, upon the completion of which he will be again called before the court and be given an opportunity to amend his testimony as recorded, or pronounce it correct. The request was

granted, and the witness was instructed accordingly; whereupon he withdrew, after being cautioned by the president not to discuss matters pertaining to the inquiry.

Mess Attendant JOHN H. TURPIN, U. S. Navy, appeared as a witness before the court, and was duly sworn by the president.

Examined by the JUDGE-ADVOCATE:

Q. State your full name, your rate, and the ship to which you are attached.

A. John Henry Turpin, mess attendant, attached to the U. S. S. *Maine*.

Q. Where were you when the first indication of any trouble occurred on the night the *Maine* was destroyed?

A. Down below in the wardroom pantry.

Q. In the wardroom pantry?

A. Yes, sir.

Q. Sitting down or standing up?

A. Sitting down.

Q. Facing which way?

A. Facing the door as you come out of the pantry.

Q. Facing the inboard door?

A. Yes, sir.

Q. The pantry is on the starboard side, is it?

A. Yes, sir.

Q. You were facing inboard?

A. The pantry is situated like this [indicating]. As you come in from the wardroom, you come in so [indicating]. I was facing the door as you come out.

Q. Facing the inboard door?

A. The inboard door.

Q. Not the door leading into the wardroom?

A. No, sir; not the door leading into the wardroom.

Q. The door leading into the passage amidships?

A. The door leading into the passage.

Q. How far were you out into the pantry; how far away from the door?

A. Right by the ice box.

Q. Tell us how far that is—about halfway?

A. About halfway.

Q. Tell the court exactly what you felt and heard and saw.

A. I just felt the ship heave, and it seemed to lift, like that [indicating]. I just felt the ship heave and lift.

Q. Lift which way?

A. She lifted up and kind of listed to port.

Q. What made her do that?

A. It was a jarring explosion—just one solid explosion, and the ship heaved and lifted like that, and then all was dark. I met Mr. Jenkins in the mess room, and by that time the water was up to my waist, and the water was running aft. It was all dark in there, and he hollered to me, and he says, "Which way?" I don't know what he meant by that. I says, "I don't know which way." He hollered again, "Which way?" I says, "I don't know, sir, which way." And he hollered the last time; he says, "Which way?" I says, "I don't know, sir." Then I was groping my way, and the water was up to my breast. Mr. Jenkins started forward, and *then the whole* compartment lit right up. That whole *compartment where the torpedoes* were lit right up, and

I seen Mr. Jenkins then throw up both hands and fall, right by steerage pantry. Then I groped my way aft, and got to the capta ladder—the ladder coming out of the wardroom—just as you come of the wardroom to go up in the cabin. When I got there the lad was carried away, and somehow or other the manrope kept fast u deck, but the ladder got adrift from it down below in the water.

By that time the water was right up even with my chin. The commenced to get scared, and in fooling around it happened that a r touched my arm, and I commenced to climb overhand and got on de When I got outside the passageway in the cabin on the starboard si I climbed up on some—I don't know what it was I climbed up Anyhow, I got up on the poop, and as soon as I got up on the poop Holman gave the order to me. He says, "Go down below and some cutlasses." I says, "Aye, aye, sir." I went down in the a gunroom, and the water was coming in at such a rush I had to co up again. So I came up again and got on the after search-light r and I dove overboard. When I dove overboard I swam a little wa and John Herbert, an ordinary seaman, was right up behind me. grabbed hold of my ankle. I says, "Let go, please; you will dro the two of us." He wouldn't let go. He kept climbing on me; s hit him. By that time he relinquished his hold, and he was picked afterwards. So I swam out, and the Spanish boat passed me, an went under the water again. I was afraid there was some danger, I went under water again, and when I rose again the barge passed, a I got inside.

By the COURT:

Q. Where were you at the time; right astern of the ship?

A. Right astern of the ship; yes, sir. That is my experience about

By the JUDGE-ADVOCATE:

Q. You felt only one shock?

A. I felt only one shock.

Q. Only one lift of the ship?

A. Only one lift of the ship.

Q. She lifted first and then went down to port?

A. Yes, sir.

Q. What kind of noises did you hear?

A. It sounded like distant thunder—just a rumbling.

By the COURT:

Q. Were you asleep?

A. No, sir; I was not asleep. I had just as good sense about and was as wide awake as I am now.

Q. How do you know you were not asleep?

A. I know I was not asleep because I was standing there talking.

Q. I thought you said you were sitting down?

A. I was sitting down. I was talking to a couple of the boys there—Harris and Robert White.

Q. What became of them?

A. Harris—how he got on deck, I don't remember.

The judge-advocate requested that the testimony given by witness be not read to him by the stenographer, but that he be direc to report to-morrow morning at 10 o'clock, when he will be f nished with so much of the record as contains his testimony and asl to withdraw for the consideration of the same, upon the completion which he will be again called before the court and be given an opp

tunity to amend his testimony as recorded or pronounce it correct. The request was granted, and the witness was instructed accordingly; whereupon he withdrew, after being cautioned by the president not to discuss matters pertaining to the inquiry.

Seaman MARTIN LARSEN, U. S. Navy, appeared as a witness before the court, and was duly sworn by the president.

Examined by the JUDGE-ADVOCATE:

Q. State your full name, rate, and to what ship you are attached.

A. Martin Larsen, captain of the hold, seaman; attached to the U. S. S. *Maine*.

Q. When did you leave the *Maine*?

A. The 21st of January.

Q. How long had you been captain of the hold?

A. Fifteen months, sir.

Q. What were your duties at night in securing the hold?

A. Closing all the hatches, and seeing that everything was secure and all lights out.

Q. You always saw that securely done before reporting at 8 o'clock?

A. Yes, sir.

Q. Who relieved you when you left the ship?

A. Neilson.

Q. What kind of a man is Neilson?

A. He is a very good man.

Q. A reliable man?

A. Yes, sir.

Q. Did you explain all of your duties to him?

A. Yes, sir; I didn't have time to. I was sick at the time, and they seemed to be in a hurry to get me off the ship.

Q. He is a very good man?

A. Yes, sir.

Q. Looking after everything is always done before reporting?

A. Yes, sir.

Q. Neilson was killed?

A. Yes, sir.

Q. You were not on board at the time of the explosion?

A. No, sir.

Q. Tell the court what places you closed at night before making your 8 p. m. report.

A. In port we closed the hatches leading down from the berth deck—leading down through A33.

Q. And at sea?

A. At sea every hatch was closed.

The judge-advocate requested that the testimony given by the witness be not read to him by the stenographer, but that he be directed to report to-morrow morning at 10 o'clock, when he will be furnished with so much of the record as contains his testimony and asked to withdraw for the consideration of the same, upon the completion of which he will be again called before the court and be given an opportunity to amend his testimony as recorded or pronounce it correct. The request was granted, and the witness was instructed accordingly; whereupon he withdrew, after being cautioned by the president not to discuss matters pertaining to the inquiry.

The court then (at 3.35 p. m.) adjourned until to-morrow morning, March 2, 1898, at 11 o'clock.

NINTH DAY.

UNITED STATES COURT-HOUSE,
Key West, Fla., 10 a. m., Wednesday, March 2, 1898.

The court met pursuant to adjournment of yesterday, the first instant.

Present: All the members of the court, the judge-advocate, and the stenographers.

The record of the proceedings of yesterday, the eighth day of the inquiry, was read and approved.

Passed Assistant Engineer BOWERS here appeared before the court.

The JUDGE-ADVOCATE. Mr. Bowers, have you read over the record of your testimony given yesterday?

Mr. BOWERS. Yes, sir.

The JUDGE-ADVOCATE. Is it correct as recorded?

Mr. BOWERS. I should like to make some few corrections.

The JUDGE-ADVOCATE. Please name them.

Mr. BOWERS. On page 330, in the second line from the bottom, I should like to leave out the words "the other tank," and say "the starboard bunker."

On page 332, the fourth line from the top, "When I went off watch we were using what we used, No. 4 bunker," should be, "When I went off watch we were using No. 4 bunker."

The JUDGE-ADVOCATE. You wish to leave out, "what we used"?

Mr. BOWERS. Yes, sir.

The JUDGE-ADVOCATE. Is your testimony as amended correct?

Mr. BOWERS. Yes, sir.

Assistant Engineer MORRIS appeared before the court:

The JUDGE-ADVOCATE. Have you read over the testimony given by you yesterday as recorded?

Mr. MORRIS. Yes, sir.

The JUDGE ADVOCATE. Is it correct as recorded?

Mr. MORRIS. No, sir; I have one change to make.

The JUDGE ADVOCATE. State what it is.

Mr. MORRIS. On page 336, in the twelfth line, the answer should be: "I looked into B4." The record from there down to the tenth line from the bottom of the page should be struck out.

The JUDGE-ADVOCATE. I can not strike out the record. I will have to repeat the questions to you as I put them, and you can answer them any way you like. I will repeat them:

"By the JUDGE-ADVOCATE:

"Q. If there had been any combustion going on in A16, would you have noticed it when you went into B6"?

"A. I did not go into B6."

Q. You want to strike out "I did not go into B6"?

A. Yes, sir.

"Q. I am speaking of A16, not A15, the port bunker. Which bunker did you go into at 7.45?"

A. There is a misunderstanding there. I was in B3, B5, and A15.

Q. Which port bunker did you go into at 7.45?

A. I looked into B4.

Q. Your previous answer read: "I looked inside; yes, sir, into B4.

There was nothing unusual there. I simply had the door closed down, as it was night inspection. I did not enter B6." Is that correct?

A. That is correct.

The JUDGE-ADVOCATE. Then your testimony as amended is correct?

Mr. MORRIS. Yes, sir.

The judge-advocate asked and received permission to ask some additional questions of Lieutenant Bowers.

Examined by the JUDGE-ADVOCATE:

Q. You were on watch during the day of February 15?

A. Yes, sir.

Q. What boilers were in use?

A. Boilers G and H.

Q. Those were the two after boilers?

A. The two after boilers.

Q. What was the condition of these boilers?

A. I looked at the fires and noted the water in the glass. There was three-quarters of a column of water. The boilers were in every way in a normal condition.

Q. At what time did you make this inspection last?

A. 7.45.

Q. Was there a careful watch on over these boilers?

A. Yes, sir.

Q. Good men?

A. Yes, sir.

Q. They were all at their stations?

A. Yes, sir.

Q. They all went to their stations at 8 o'clock, the relief watch?

A. Half the relief was down there at the time. The water tender was down there and one of the firemen.

Q. At what time?

A. At 7.45, or when I came out. At about five minutes to 8 I left the compartment.

Q. I am speaking of the first watch that night. You have every reason to believe the watch was carefully set at 8 o'clock, and that they did their duty?

A. Yes, sir.

Q. They were good men in that watch?

A. Yes, sir; the water tender was the most reliable water tender in the ship.

There being no further questions to ask this witness, his testimony was read over to him by the stenographer, and by him pronounced correct.

The witness then retired, after being cautioned by the president not to converse about matters pertaining to the inquiry.

Naval Cadet CRENSHAW here entered the court.

The JUDGE-ADVOCATE. You have read over your testimony of yesterday as recorded?

Mr. CRENSHAW. Yes, sir.

The JUDGE-ADVOCATE. Is it correct?

Mr. CRENSHAW. No, sir; there is one mistake.

The JUDGE-ADVOCATE. Please state what correction you wish to make.

Mr. CRENSHAW. At the end of line 23, page 341, strike out the period, so that it will read: "It seemed to me that through the door that leads into the compartment just forward of that there was a rushing noise of some kind."

The JUDGE-ADVOCATE. Is your testimony as amended correct?

Mr. CRENSHAW. It is.

The witness then retired after being cautioned by the president not to converse about matters pertaining to the inquiry.

Private MCKAY, U. S. Marine Corps, here entered the court.

The JUDGE-ADVOCATE. Private McKay, you have had read to you the testimony which you gave yesterday?

Private MCKAY. Yes, sir.

The JUDGE-ADVOCATE. Is it correct as recorded?

Private MCKAY. Yes, sir.

The witness then retired after being cautioned by the president not to converse about matters pertaining to the inquiry.

Apprentice HAM here entered the court.

The JUDGE-ADVOCATE. Apprentice Ham, you have had read to you the testimony which you gave yesterday?

Apprentice HAM. Yes, sir.

The JUDGE-ADVOCATE. Is it correct as recorded?

Apprentice HAM. Yes, sir.

The witness then retired after being cautioned by the president not to converse about matters pertaining to the inquiry.

Apprentice DRESSLER here entered the court.

The JUDGE-ADVOCATE. Apprentice Dressler, you have had read to you the testimony which you gave yesterday?

Apprentice DRESSLER. Yes, sir.

The JUDGE-ADVOCATE. Is it correct as recorded?

Apprentice DRESSLER. Yes, sir.

The witness then retired, after being cautioned by the president not to converse about matters pertaining to the inquiry.

Sergeant MEHAN here entered the court.

The JUDGE-ADVOCATE. Sergeant Mehan, you have had read to you the testimony which you gave yesterday?

Sergeant MEHAN. Yes, sir.

The JUDGE-ADVOCATE. Is it correct as recorded?

Sergeant MEHAN. Yes, sir.

The witness then retired, after being cautioned by the president not to converse about matters pertaining to the inquiry.

Corporal THOMPSON here entered the court.

The JUDGE-ADVOCATE. Corporal Thompson, you have had read to you the testimony which you gave yesterday?

Corporal THOMPSON. Yes, sir.

The JUDGE-ADVOCATE. Is it correct as recorded?

Corporal THOMPSON. Yes, sir.

The witness then retired, after being cautioned by the president not to converse about matters pertaining to the inquiry.

ter-at-Arms LOAD here entered the court.

JUDGE-ADVOCATE. Master-at-Arms Load, you have had read to e testimony which you gave yesterday?
ter-at-Arms LOAD. Yes, sir.
JUDGE-ADVOCATE. Is it correct as recorded?
ter-at-Arms LOAD. Yes, sir.
witness then retired, after being cautioned by the president not verse about matters pertaining to the inquiry.

nan PETER LARSEN here entered the court.

JUDGE-ADVOCATE. Seaman Peter Larsen, you have had read to e testimony which you gave yesterday.
nan PETER LARSEN. Yes, sir.
JUDGE-ADVOCATE. Is it correct as recorded?
nan PETER LARSEN. Yes, sir.
witness then retired, after being cautioned by the president not verse about matters pertaining to the inquiry.

nan MOLINIERE here entered the court.

JUDGE-ADVOCATE. Seaman Moliniere, you have had read to ıe testimony which you gave yesterday.
nan MOLINIERE. Yes, sir.
JUDGE-ADVOCATE. Is it correct as recorded?
man MOLINIERE. Yes, sir.
witness then retired, after being cautioned by the president not verse about matters pertaining to the inquiry.

tswain's Mate BERGMAN here entered the court.

JUDGE-ADVOCATE. Boatswain's Mate Bergman, you have had o you the testimony which you gave yesterday?
tswain's Mate BERGMAN. Yes, sir.
JUDGE-ADVOCATE. Is it correct as recorded?
tswain's Mate BERGMAN. Yes, sir.
witness then retired, after being cautioned by the president not verse about matters pertaining to the inquiry.

ıdsman FOX here entered the court.
JUDGE-ADVOCATE. Landsman Fox, you have had read to you stimony which you gave yesterday?
ıdsman FOX. Yes, sir.
JUDGE-ADVOCATE. Is it correct as recorded?
ıdsman FOX. Yes, sir.
witness then retired, after being cautioned by the president not verse about matters pertaining to the inquiry.

ıdsman LANAHAN here entered the court.

JUDGE ADVOCATE. Landsman Lanahan, you have had read to ıe testimony which you gave yesterday?
ıdsman LANAHAN. Yes, sir.
JUDGE-ADVOCATE. Is it correct as recorded?
ıdsman LANAHAN. Yes, sir.
witness then retired, after being cautioned by the president not verse about matters pertaining to the inquiry.

Coal Passer MELVILLE here entered the court.

The JUDGE-ADVOCATE. Coal Passer Melville, you have had re you the testimony which you gave yesterday?

Coal Passer MELVILLE. Yes, sir.

The JUDGE-ADVOCATE. Is it correct as recorded?

Coal Passer MELVILLE. Yes, sir.

The witness then retired, after being cautioned by the presider to converse about matters pertaining to the inquiry.

Coxswain WILBER here entered the court.

The JUDGE-ADVOCATE. Coxswain Wilber, you have had read t the testimony which you gave yesterday?

Coxswain WILBER. Yes, sir.

The JUDGE-ADVOCATE. Is it correct as recorded?

Coxswain WILBER. Yes, sir.

The witness then retired, after being cautioned by the presider to converse about matters pertaining to the inquiry.

Seaman RAU here entered the court.

The JUDGE-ADVOCATE. Seaman Rau, you have had read to yo testimony which you gave yesterday?

Seaman RAU. Yes, sir.

The JUDGE-ADVOCATE. Is it correct as recorded?

Seaman RAU. Yes, sir.

The witness then retired, after being cautioned by the presider to converse about matters pertaining to the inquiry.

Fireman GARTRELL here entered the court.

The JUDGE-ADVOCATE. Fireman Gartrell, you have had read t the testimony which you gave yesterday?

Fireman GARTRELL. Yes, sir.

The JUDGE-ADVOCATE. Is it correct as recorded?

Fireman GARTRELL. Yes, sir.

The witness then retired, after being cautioned by the presiden to converse about matters pertaining to the inquiry.

Seaman MATTSON here entered the court.

The JUDGE-ADVOCATE. Seaman Mattson, you have had read t the testimony which you gave yesterday?

Seaman MATTSON. Yes, sir.

The JUDGE-ADVOCATE. Is it correct as recorded?

Seaman MATTSON. Yes, sir.

The witness then retired, after being cautioned by the presiden to converse about matters pertaining to the inquiry.

Mess Attendant TURPIN here entered the court.

The JUDGE-ADVOCATE. Mess Attendant Turpin, you have had to you the testimony which you gave yesterday?

Mess Attendant TURPIN. Yes, sir.

The JUDGE-ADVOCATE. Is it correct as recorded?

Mess Attendant TURPIN. Yes, sir.

The witness then retired, after being cautioned by the presiden to converse about matters pertaining to the inquiry.

Seaman HARRY S. MCCANN, U. S. Navy, appeared as a witness before the court, and was duly sworn by the president.

Examined by the JUDGE-ADVOCATE:

Q. Please state your full name, your rate, and to what ship you are attached.

A. Harry S. McCann; seaman; serving on board the U. S. S. *Maine*.

Q. Were you on board the *Maine* at the time of her destruction in Havana?

A. Yes, sir.

Q. What part of the ship were you in at the moment it commenced?

A. I was in the after part of the ship, on the quarter deck, right abaft the middle superstructure.

Q. What part of the superstructure were you nearest to?

A. I was nearest to the ladder leading up to the superstructure.

Q. The one that has the rail underneath?

A. Yes, sir; I was within 5 feet of the ladder.

Q. Which way were you facing?

A. Outboard. My head was facing the superstructure. My feet was aft—lying down.

Q. You were lying down?

A. Yes, sir.

Q. Were you asleep?

A. I was neither awake nor asleep. I was in a sort of doze.

Q. Tell the court exactly what you felt, saw, and heard.

A. I felt a jar and I saw a flash of light—a red fire and an explosion. That is all, sir.

Q. What kind of a jar was it you felt?

A. I don't know—like a lifting.

Q. Did the ship tremble?

A. Yes, sir.

Q. How soon did the explosion come in regard to the jar?

A. I should say about an interval of a second or so.

Q. Did that jar the ship—did the explosion jar the ship much?

A. Yes, sir.

Q. What became of you?

A. I remained where I was. I wasn't thrown. I just stayed right there.

Q. Were you knocked senseless?

A. No, sir.

Q. What made you stay there?

A. I waited there until the débris and stuff stopped dropping, and I came from underneath the awning and went to the starboard rail, right there at the starboard gangway; then I jumped overboard and got under the gig.

By the COURT:

Q. Was the first shock that you felt accompanied by any sound; was there any report?

A. No; not the jar. There was no report to the jar, sir. I got in a sitting position; then came the flash and the report.

Q. Then there was but one report, was there?

A. That is all I remember hearing; there might have been more.

Q. That is what we want to know.

A. I couldn't swear there was any more, sir.

Q. That is what we want. You heard *only one* report, but you felt the jar before the *report came?*

A. *Yes, sir.*

There being no further questions to ask this witness, his testimony was read over to him by the stenographer and by him pronounced correct.

The witness then withdrew, after being cautioned by the president not to converse about matters pertaining to the inquiry.

Landsman KANE, U. S. Navy, appeared as a witness before the court, and was duly sworn by the president.

Examined by the JUDGE-ADVOCATE:

Q. Please state your full name, rate, and to what ship you are attached.

A. Joseph H. Kane; landsman; U. S. S. *Maine*.

Q. Were you on board the *Maine* at the time of her destruction in Havana?

A. Yes, sir.

Q. Tell the court exactly where you were at the beginning of the trouble.

A. I was in the after part of the superstructure, on the starboard side.

Q. Which superstructure; the middle superstructure?

A. Yes, sir.

Q. You were right over the armory?

A. Right forward of the armory; as far aft as I could be on that side.

Q. Inside?

A. Yes, sir; on the starboard side.

Q. You were inside the superstructure?

A. Yes, sir; looking out to port, where the ice chest is. I was looking out to port on the starboard side, and I seen a flash, followed by an explosion. I didn't see the fire itself, but I seen the reflection, as from a fire, a light. I was thrown below decks somewhere; I don't know where. I guess it must have been below decks. When I emerged I was on the port side, under the port crane. I came out on the main deck. It must have been below decks, and I came through a manhole.

By the COURT:

Q. You stood looking out of this air port [indicating]?

A. I was standing abaft the 6-inch gun support, and I saw a flash of light in the starboard gangway.

Q. Were you under water during that time?

A. When I first went down I was pinned down. It must have been wood, and the water came and lifted the weight off my body, and I was able to get up. By that time the water was up to my waist.

Q. It is impossible to explain how you got there?

A. Yes, sir; I didn't walk a step. Load was with me all the time.

Q. Did you crawl up?

A. Yes, sir.

Q. You crawled up through this manhole?

A. Yes, sir.

Q. Or bunker plate, whatever it was?

A. It was a natural hole. There was nothing broken in there, because the iron rim on there was perfectly smooth. I think it was a coal chute, or something of that sort.

By the JUDGE-ADVOCATE:

Q. What was the first thing you felt; the very first thing?

A. *The first thing* I felt was the shock, and I was thrown very quick.

Did you hear a noise with it?
Yes; I heard a noise.
What kind of a noise?
Like the report of a gun, very close.
What did you hear next?
Nothing but a roar right along until I got out.
You mean, when you first heard the noise begin, the roar came diately; or was there an interval?
It sounded like the gun was fired, and you heard the roar for a while afterwards; for two or three seconds.
Interval?
No; following.
The roar lasted two or three seconds?
Yes, sir.
Then you found yourself below decks?
Yes, sir.
And you crawled out on the port side of the main deck?
Yes, sir.

By the COURT.

What is the height between the main and berth decks; could you up?
It is about 10 feet.
How do you suppose you got hold of that opening to get up?
As I say, there was water there, and débris, ditty-boxes, and all stuff, piled up. Then there was some kind of a tank there—some of an iron or copper, or some kind of a metal tank there—that . I could see that. That helped me up. I got up on it, and I long stick, probably three or four feet long. I stood it upright, out it straight on the plate, and I hauled myself up. I got my s on it, and crawled up through it. The water raised a good deal. s up to my waist. There was débris of every kind and wreckage around there.
What happened to you after that?
After that I crawled from the main deck up on to the hammock ngs and into the whaleboat. The painter of the boat was thrown d made fast. All the men that was there with me got in the boat.
When were you hurt?
Where was I hurt?
When or where?
The wreckage was falling on me, and I hurt myself trying to lift wreckage off. Whatever was on me, it must have been wood, use when the water came it lifted off itself.
You broke your arm then, did you?
My shoulder. I dislocated it. My breast is hurt, too.
ere being no further questions to ask this witness, his testimony read over to him by the stenographer, and by him pronounced ct.
e witness then withdrew, after being cautioned by the president o converse about matters pertaining to the inquiry.

mmander JAMES M. FORSYTH, U. S. Navy, appeared before the as a witness, and was duly sworn by the president.

Examined by the JUDGE-ADVOCATE:

Please state your full name, *rank, and to* what ship duty you are esent assigned.

A. James M. Forsyth; commander, U. S. Navy; commandant of the Key West Naval Station.

Q. Did you receive any orders recently in regard to examining the coal pile at Key West, which is the property of the Government?

A. I did.

Q. Please state what orders you received.

A. On the 17th of February I received a telegram from the Chief of the Bureau of Equipment to "examine anthracite coal pile thoroughly for infernals. Signed, Bradford."

Q. What steps did you take to carry out this order?

A. I appointed three of the employees as inspectors, and hired a gang of shovelers to turn the coal over with shovels—to shift it with shovels.

Q. Whom did you put in charge of the whole work?

A. Charles Goodwin, machinist.

Q. A reliable man?

A. I consider him a very reliable man.

Q. Has the work been completed?

A. The work was completed in about three days.

Q. How much coal was in the pile, about?

A. About one thousand tons.

Q. When did the *Maine* coal here recently—since her coming down from the north?

A. Twice.

Q. What coal did she receive, and how much each time; the kind of coal, I mean?

A. She received anthracite coal, 280 tons at the first coaling, and I think 270 tons at the second. I have a memorandum of that.

Q. Refer to that paper.

A. This is taken from the log of the station; 280 tons at the first, and 271 tons at the last coaling.

Q. Can you give the dates of the coalings?

A. Yes, sir; the first was December 20 to 22, 1897, and the second January 18 and 19, 1898.

Q. Did she receive the coal from the pile which you have examined?

A. No, sir.

Q. What became of the coal that was in that pile at that time?

A. The coal that she received was mostly Morea coal from the Morea coal mine; anthracite Morea coal.

Q. That has all been given to ships?

A. It has all been given to ships. There may be a few tons of it left outside, on the eastern end, but I am not sure, because the two coals were mixed; but her main body of coal that she received was Morea coal. I would further say that she may have received some red-ash coal that was sent down later from the *Natalie*. There may have been some carloads of the *Natalie* coal; but the main body of her coal was Morea.

Q. How did the coal arrive here that she received?

A. In schooners.

Q. Alongside the wharf?

A. Alongside the wharf.

Q. It was taken up in the regular method to the storehouse?

A. Taken up in the regular method to the storehouse, and handled in the regular way.

Q. How long had that coal been here which the *Maine* received?

A. It was received in January, 1897.

ℓ. What report did Mr. Goodwin make to you after his inspection?
ℓ. He reported that there had been nothing unusual discovered. ın also say that I visited the work at intervals myself, and also had ymaster Jewett visit the work at intervals while it was going on, to that it was carried on so that the inspector could see every shovel of coal that was moved; and they said that all of it was examined ıp by lump.
ℓ. The coal was taken to the *Maine* in the usual method pursued in coaling of ships?
ℓ. No, sir; rather unusual. It was coaled by lighter. Ships gen- lly come alongside the wharf and coal, but the *Maine's* draft was essive. The draft was too great. The captain did not wish to ng her alongside the wharf; so it was put on lighters. So the coal s really handled twice more than it would have been if it had been led in the usual way.
here being no further questions to ask this witness, his testimony s read over to him by the stenographer and by him pronounced rect.
he witness then withdrew, after being cautioned by the president to converse about matters pertaining to the inquiry.

Machinist CHARLES GOODWIN appeared as a witness before the ırt, and was duly sworn by the president.

Examined by the JUDGE-ADVOCATE:

Q. Please state your full name, your business, at present, and your sidence.
A. Charles Goodwin; foreman of the Government machine shop in ey West.
Q. You reside in Key West?
A. I reside in Key West. I reside in the shop.
Q. Did you, about the middle of February, receive an order from the mmandant of this station to make an inspection of the coal pile for fernals?
A. I did, sir.
Q. Do you remember when you received the order?
A. I received it on last Saturday, a week ago.
Q. Did you carry out the order?
A. I did.
Q. In what way?
A. I had all the pile of coal turned directly over, so that I could see rough every particle. I had two assistants with me, but I was there l the time myself. Not a particle of coal was left unturned over—of the thracite coal, not the bituminous coal. There was bituminous coal ere, too. Of the anthracite coal there was not a particle that was t turned thoroughly over, so that I could see through the whole it.
Q. Was anything found wrong by anybody during this work?
A. Nothing at all.

By the COURT:

Q. What did you expect to find?
A. I thought I might find some unforeseen bombs or something like at. That is what I expected. I found one piece of coal with a hole rilled through it, but that was nothing more than where they drilled blast it. I was careful, *of course, to see. I could* tell pretty near

the difference between the coal and any substance of iron or anything that way.

Q. You could have seen a bomb or a piece of pipe or anything of that sort?

A. Anything that way. I found one old tin can with some white lead in it. That might have dropped from the ship.

There being no further questions to ask this witness, his testimony was read over to him by the stenographer and by him pronounced correct.

The witness then withdrew, after being cautioned by the president not to converse about matters pertaining to the inquiry.

The JUDGE-ADVOCATE. I would like to inform the court that I have no more testimony to offer from any of the survivors of the *Maine* at Key West. All who can give any testimony in the matter, as far as I can learn, have been before the court. There is only left the testimony of the survivors in a body, which the court desires to take.

At the request of the judge-advocate, the court was then cleared for deliberation. The stenographer withdrew.

The doors were then opened and the stenographer entered.

The court then (at 1.15 p. m.) took a recess until 2 p. m., at which time it was decided that the court would proceed to the military station, Key West, at which place the wounded were being cared for and the other men were quartered.

The court reassembled at the expiration of the recess.

Present: All the members, the judge-advocate, and the stenographer.

The court then proceeded in a body to the army barracks at Key West. On reaching there, all the survivors of the *Maine*, officers and men, who were able to attend, were assembled in the presence of the whole court. The president of the court administered the oath to them which is usually administered to witnesses, whereupon the judge-advocate asked the following questions:

The JUDGE-ADVOCATE. Is there present any officer or man who has any complaint to make or any fault to find with any officer or man belonging to the *Maine* on the night of the destruction of that ship, at Havana, February 15, of this year? If so, let such officer or such man step to the front.

No one stepping to the front, each one of you declares under oath that you have no fault to find and no complaint to make of any officer or man belonging to the *Maine* on that night.

Is there any officer or man here present who has any complaint to make against or fault to find with any officer or man belonging to the *Maine* as to the care and guarding of that ship in the harbor of Havana previous to her destruction on February 15, 1898? If any such officer or man has any such complaint to make or fault to find, let him step to the front.

No one stepping to the front, each one of you declares under oath that you have no complaint to make against or fault to find with any officer or man as to the care and guarding of the ship previous to her destruction.

The court then (at 2.35 p. m.) adjourned to meet to-morrow, at — o'clock — m., at its usual place of meeting, the United States court-house, Key West.

TENTH DAY.

U. S. L. H. TENDER MANGROVE,
Harbor of Havana, 10 a. m., Saturday, March 6, 1898.

The court met pursuant to the last adjournment on Wednesday, the instant, at Key West, Fla.

Present: All the members of the court, the judge-advocate, and the nographer. Captain Sigsbee and Lieut. Commander Wainwright re also present, at their own request.

The record of the proceedings of the last meeting were read and proved.

Ensign POWELSON here appeared before the court and was warned the president of the court that he was still under the oath he had eviously taken.

Examined by the JUDGE-ADVOCATE:

Q. Ensign Powelson, have you any further evidence to offer to this urt—evidence that you may have discovered since the court left avana?

A. Yes, sir.

Q. Is the nature of the evidence such as is derived from your own servation or from the reports made to you from time to time by the vers?

A. It is from reports made to me by the divers.

Q. Did you take notes at the time such reports were made to you by e divers?

A. I did.

Q. You will please give your evidence as far as possible, giving each ver separately; also, in giving your evidence give it in such a manner at the convening authority and the authorities in Washington will e able to understand it without having before them the sketches upon hich you may point out different objects in the course of your testi- ony. Please proceed.

A. I will first take up the reports of Chief Gunner's Mate Olsen, one f the divers. I will first submit to the court a rough sketch showing e forward body of the ship, forward of about frame 28.

The JUDGE-ADVOCATE. I request that this sketch be appended to e record as one of the exhibits.

The request was granted, and the sketch was appended to the rec- d, marked "H."

The WITNESS. This is the report Diver Olsen made to me at 11.40 m. March 1, 1898:

He went down the after wing of the after V, marked "A" in sketch bmitted, and he counted 9 frames, counting the highest frame No. 1. his highest frame is frame 17. Frames 21 and 22 had floor plates ill attached. The other frames had only the angle irons next the in left. The floor plates on 21 and 22 were bent forward from their iginal position. He found the first longitudinal at about frame 24. He w it for about two frame spaces. This first longitudinal was not own in the sketch, because it is under the inside plating.

By the COURT:

Q. Will you please put in explanations?

A. He saw it for about two frame spaces. The outer skin was broken th the rivet holes at the edge between the first and second longitudi- ls, at frame 24. This break was at the butt of the plate. Following

the second longitudinal down, he came to the end where it is broken off and very ragged. He followed the plate A in the sketch until it turns underneath the keel about 10 inches. There it ends with ragged edges touching the flat part of the keel. He then came up and went forward of this plate A of which I have spoken, and went on to the plate marked B in the sketch. He went down the plate B and found it extended 10 frame spaces. There, at the end of 10 frame spaces, he found the plating ended with ragged edges about 2 feet from the green outside bottom plating. Plate B is forward in the sketch, and plate A aft. He followed the longitudinal down. The green plating is underneath the plate B. He went down, and it slopes in the same general direction, inclined about 45 degrees.

He could step at the bottom of plating B down onto the green outside plating. He followed the green plating down about 10 feet and got into the mud. The green plating is attached to the flat keel. The keel seems to go forward under the mud. He could feel the keel sloping upward aft and to starboard where he was standing in the mud. On the flat part of the keel he felt for the outside keel plating, but he could not find where it lapped, although he felt in from the keel about 10 feet. He found a plate with rivets along the edge about 10 inches from the angle of the flat part of the keel. He found no raised and sunken plating. It was smooth for about 12 feet up at right angles to the flat part of the keel. He then found something which he sketched for me, and by the way he described it it was like a small bilge keel. This projection that he found was about 12 feet from the mud. He then went out clear of the ship into the mud and found some boxes of canned goods and some loose cans seemingly unhurt. Some of the cans were square, like beef cans; others were cylindrical. He took a 2-foot rule with him and measured the dimensions of the outside keel plate, and he found that the flat part of the outside keel plate was between 14 and 15 inches wide, and also found it extended up the sides from the flat part on each side a distance of 18 inches.

I would like to say that from the studying of the drawings, after Olsen's report, and his distances, I find that he found the keel go into the mud at about frame 7, and above that he found the ram plate which stick out from the side of the ship on each side at the bows.

Olsen went down the next time in the forenoon of March 3. This time I gave him orders to see if he could find the top part of the keel—that is, the highest point of the keel—as he had reported to me it had extended upward and starboard quite a steep slope. He went down on the top part of the plate marked "A" in the sketch, and followed frame 17 until he found the break in the keel. I had ordered him to take a 2-foot rule with him in order to get the exact dimensions of the plates at the point where he might find a break in the keel. He took the following measurements at the break: First he measured the inner keel plate, and found that the total width of the plate was 35 inches. He then measured the outer keel plate and found the total width to be about 45 inches. It is so dark where the divers work that they can not see the numbers on the 2-foot rule, and they have to guess at the distance of anything under a foot by the proportion, so that these measurements may be in error an inch or two.

He found at the first frame forward of the break in the keel a lightening hole in the floor plate. He took the measurement of this hole, and found that the major axis was 20 inches and the minor axis 12 inches. He then found a manhole in the inner skin just forward of the break in the vertical keel on the port side. He took measurements of

this manhole, and found the major axis 22 inches and the minor axis 15 inches. He then measured the spacings of the rivets on the angle irons of the vertical keel, and found them to be 3 inches. He found between the outer and inner skins at the point where the break occurs in the vertical keel a four-way pipe. This was on the port side of the vertical keel. One branch was horizontal, and extended starboard to the vertical keel and ended there with a blank flange. Another branch of the pipe extended athwartships to port. Another extended vertically up through the inner bottom, and the fourth extended vertically downward.

The horizontal branches were found to measure 4 inches in diameter. The lower vertical branch measured 3 inches in diameter. The vertical keel was broken at about the point where the pipe with the blank flange pierced it. He measured the height of the vertical keel and found it to be 36 inches. In this compartment he found a water alarm and sent it up on a line. This was just forward of the break in the vertical keel on the port side, about 9 inches at its lowest point from the outer skin. The angle irons along the vertical keel he measured and found to be 3-inch flange, and the angle between the broken parts of the vertical keel he found to be considerably more than a right angle. He found a manhole 14 or 15 inches below the break in the vertical keel on the port side, in the inner skin. He also found one in a similar place on the starboard side of the vertical keel. About 8 or 10 feet farther down the keel, which at this point runs down in a vertical line, he found on the starboard side a manhole. Near this manhole he found a blank flange and three pipe holes in the inner skin. About 10 or 12 feet farther down than this last manhole he found two more manholes, symmetrically placed on each side of the vertical keel, in the inner skin.

These two manholes were in the part of the keel which in the sketch is represented as turning and going nearly horizontal at the point marked C. He found that abaft this point C the inner bottom was of a corrugated form, having large corrugations bent in it. The bottom plating on each side of the keel along in the vicinity of the point C slopes downward from the keel. Near the starboard manhole of the last pair of manholes he described there was a pipe running down through the inner bottom just to port of it. He could not see whether this pipe belonged there or was driven there. The edges of the plate, I would say, were all ragged. He felt down through the starboard manhole and found a piece of pipe with an elbow in it. This elbow and the piece of pipe he referred to as coming down through the double bottom, looked as if they had originally been the same piece. On top of the inner skin, a little abaft these last two manholes to which he referred, he found two 3-inch pipes running across the ship. He could not say whether they were originally there or not. Between these two manholes and the keel and forward of them was a blank flange. These two manholes were in the level part of the keel about 10 feet abaft where the vertical part comes down to the horizontal part. These two manholes in the inner skin were 6 or 7 feet apart. Abaft these manholes there is a great deal of wreckage, and he could not tell anything about what it was.

The COURT. This is Olsen's report all the time, is it?

A. Olsen; yes, sir.

At about frame 22, on the starboard side, he found, 8 or 10 feet from the keel, 30 or 40 6-pounder shells detached from the cases, a lot of brass cases, 6-pounder, seemingly exploded. He found many more

projectiles than cases. He found at the same place one 6-inch shell, which he sent up. I examined this shell and found that it was still in its slings, with its wooden nose cap still attached, the wood of which was uninjured and unburned. The slings were unburned and uninjured, except one part which had been cut. Just forward of that place he found a lot of knapsacks, rubber blankets, haversacks, and canteens, some of which he sent up. They were unburned and uninjured. He also found a lot of blacksmith's tools where he found the 6-inch shell. The place for the 10-inch magazine he found covered with wreckage, which seemed to have been from port to starboard.

On the forenoon of March 4 Olsen went down again. He went down until he found the break in the vertical keel; then he slid down the vertical part of the keel until he came to about frame 24, as I determined from all the measurements and data that he and Smith had in the meantime taken in reference to the keel. Then he walked out to starboard. He found a good many 6-inch shell, and some powder tanks, one of which he sent up.

By the COURT:

Q. What size?

A. Six-inch powder tank. I examined this tank, and found it was battered up and opened up along the seam for only about a foot. It had evidently not exploded. Excelsior in good condition was found in it. The bag was also sent up with it. Olsen then found the outboard bulkhead of the 10-inch magazine bent outward and about horizontal. In this bulkhead was a square box, with one hole in it for a deadlight. The box was built in the bulkhead from the coal bunker side. This box was apparently uninjured, except the glass light in it was gone. The rim holding the circular glass disk was not injured. He took the cover off the box and sent up the frail, light box, which holds the incandescent magazine light. When this box reached the top of the water I examined it and found that it was in very good shape. The joinings at the corner of the box had been shaken loose, but the box itself was very slightly bent, and still had two wires about three feet in length attached to it. The small water-tight cover to the light box was also sent up. It was very slightly bent, and its rubber gasket was not burnt and was intact.

On this starboard 10-inch magazine bulkhead, to which the light box was attached and which is now bent down to starboard and nearly horizontal, he found a manhole plate near the light box. This plate he sent up. I examined it and found that it was bent up a little on one end. The rim which holds the hinges, and which is riveted to the inner skin, was broken in two. Half of it was still attached to the manhole plate by one hinge. This rim was bent up on one side and the rubber gasket in the manhole plate was entirely gone. I found the paint burned on the under side.

Olsen felt under the light box on the bulkhead, to which he referred, the rungs of an iron ladder, riveted to the bulkhead. He followed these rungs down until he reached the floor of the magazine. There he found a crack in the inner bottom about 3 feet wide. I questioned him particularly about the edges, and he told me they were ragged and bent neither in nor out. He crawled into this double-bottom compartment and found a 10-inch gas check and two 10-inch gas-check pads, one in perfect condition, the other jammed. Neither of them was burned. He also found a cutlass scabbard in this double-bottom compartment. While in the compartment he saw the floor plates of a frame, and said the floor plates had lightening holes in them. The plate was buckled a little. He then went farther aft to

xamine the condition of the aft part of the magazine. He found that hat was covered with wreckage, going high up into the air, so that he ould not climb over it. He found 6-inch shells on top of the 10-inch anks; also paymaster's stores on top of the tanks. He broke off a iece of magazine grating and tongued-and-grooved woodwork of the 0-inch magazine, which I secured as it came to the surface. This rood was unburned.

This finishes Olsen's testimony up to this morning. He is now living.

By the JUDGE-ADVOCATE:

Q. Does any other diver testify by the sketch you have submitted?

A. Yes; Smith's work and Olsen's work are corroborative.

The following is the evidence as derived from information given to ne by Diver Smith:

On the morning of February 28 I sent Smith down on plate marked A in the sketch.

By the COURT:

Q. On top or inside?

A. On top the plate marked A in the sketch. He followed the econd longitudinal down until he got to frame 19. Then he worked imself down toward the direction of the keel, and there he found he first longitudinal which is not shown on the sketch, because t is covered by inside plating. He found the top part of this first ongitudinal at frame 19. He found the bottom plating broken, and dges pushed in from the green paint. This was on the outside of the hip. These edges were pushed in about 18 inches from the original urface of the bottom plate. He then felt along the edge of the break bout 2 feet, but could not find the plating lower down, which had riginally been attached to this edge. On account of the inner and uter plating being jammed together he could not reach further up than rame 18, nor could he reach lower down than frame 20 for the same eason. He then went down inside of the V formed by the bottom plating at frame 17 at a point marked D in the sketch.

The bottom plating at frame 17 diverges for about 15 feet; lower down it converges and comes nearly together about 20 feet down, at that point being only a few inches apart. The after wing of the V marked "A," ends at the point nearest the bottom plating, near the keel. In the afternoon of February 28, I sent Smith down to look for a circular hole which Olsen had said he found in the upper edge of the plate marked "A" on the sketch. I wished to locate this hole exactly in order to determine exactly whether the highest frame in the sketch was frame 17 or not. He counted the frame spaces along the upper edge of the plate marked "A," and found that the semicircular hole with the rivet holes around it to which sea valve had evidently been attached, was between the sixth and seventh frames, counting frame 18 as No. 1. I referred to the drawing afterwards and found that this checked up exactly, calling the highest frame in the sketch No. 17, as has been done. He found between frames 19 and 20, and near the second longitudinal, a dozen 6-pounder shells with the cartridge gone. He was unable to get any more data connected with the break in the outside plating between the first and second longitudinals at frame 19, to which he referred in his morning report. The testimony in regard to the situations of various holes, and details of construction have checked up exactly on the supposition that the highest frame sketched as frame 17, and with previous testimony given before this court.

On the morning of March 2, I sent Smith down to corroborate the evidence which Olsen had given in regard to the break in the vertical keel at frame 18. Smith took with him a 2-foot ruler. He found the thickness of the vertical keel not quite an inch. He found the four-way pipe which Olsen testified as having found, and he found that the smallest inside diameter of the horizontal branch of the pipe was 3 inches. He found that 5 inches was the largest inside diameter of the vertical branch of the pipe—Olsen testified to having found it 4 inches. He measured the distance from the vertical keel to a flange to which the port horizontal branch of the pipe is riveted. This he found to be 21 inches. He found that the diameter of the blank flange at the end of the pipe which pierced the vertical keel from port to starboard was 5 inches. He found the distance from the break in the vertical keel to the next frame forward to be 36 inches. He found the distance between the outer edges of the horizontal flanges of the two angle irons on each side at the bottom of the vertical keel plating to be 7 inches.

He measured the width of the inner keel plate and found it to be 37 inches. He found the outer keel plate lapped 4 inches beyond the inner keel plate. He found the large pipe in the double bottoms alongside the vertical keel at the point where the break occurs and measured it, and found it to be 12 inches in diameter. This pipe had a flange on the end. He measured the length of the pipe, and found it was 5 feet between this flange and where it went through the next plate. At this point he found two manholes in the inner bottom, on opposite sides of the keel, just forward of the piece of pipe to which he referred.

Smith went down again the afternoon of March 2, and went down to the break in the vertical keel, and followed the vertical point down to the point where it bends up again to the horizontal. He found the after part of the keel almost horizontal—part marked "C." When he was at this point the diving machine registered a depth of 35 feet.

Q. That is the horizontal part of the keel?

A. Yes, sir. The machine is not accurate within 5 feet, I find. At this place, near the point C in the sketch, he found a 10-inch shell, a bunch of knapsacks, and a magazine swab. He reported that the swab was not burned and was uninjured.

Smith took certain measurements of the keel at the point where it bends to go horizontally. He finds that there is a bend in the keel, extending forward for about 3 feet from the lowest part of the keel, which is now vertical; it then turns down and around through about 360 degrees and runs aft. He got in the double bottoms at a point a little way abaft where the vertical keel comes down vertically, and he found that the vertical keel itself was buckled out to starboard. He drew me a sketch of it, showing it was buckled to starboard at about the point marked C.

On February 28, in the afternoon, Smith went down to examine the forward part of the keel as far forward to the bow as he could get. He went down at the point D and walked down on the green plating until he got near the keel. He then put his back against the green side of the plate marked A on the sketch and his feet against the green side of the bottom plating under the point marked D. He worked himself along aft. He worked along about 8 feet and found the bottom to take a form of which he made me a sketch. This sketch is a cross section of the keel of the ship at about frame 12, from the measurements he took. He found the flat part of the keel to be 14 inches wide, and found that the outer keel plate lapped up along the bottom plating on each side a

ance of 1 foot 8 inches. He took these measurements with a 2-foot
. He then worked himself forward until he came to the edge of
e A and then went down to the keel on the bottom plating until
ot into the mud. At the point where the flat keel goes into the
l he found a hole in the mud. He made out that the bottom of this
was about 6 inches deep. He then made me a sketch indicating
form of the hole.

By Captain SIGSBEE:

. Six inches, you say?

. No, sir; he found the hole to be about 6 feet deep and about 15
in diameter. In the bottom of the hole he found sticking in the
l a sort of metal tank, which was hauled up by a line bent onto it.
s tank was a very thin metal, and riveted together by spacing of
ts, which was not water-tight, and evidently came from part of the
tilating system of the ship. This finishes my evidence from infor-
ion derived from Smith, the diver.

he court then (at 12.15 p. m.) took a recess until 1.30.

'he court reassembled at the expiration of the recess.

'resent: All the members of the court, the judge-advocate, the stenog-
her, Captain Sigsbee, and Lieutenant-Commander Wainwright.

Insign POWELSON, who was on the stand before the recess, resumed
stand and proceeded with his testimony as follows:

)n the forenoon of March 1 Rundquist, gunner's mate, went down
the port side of the ship abaft the port crane, and he made a report
me as follows: He said he went down a ladder placed about 5 feet
aft the port crane against the port superstructure and leading down
the main deck. Then he went over the side at a point about 12 feet
aft the break in the main deck. He found still attached to the side,
derneath the waterways of the main deck, a strip of plating 3 or 4
t wide. This plating he said was bent inboard. He lowered him-
f over the side until his feet struck something about the position of
berth deck. He did not notice any armor at that point. He said
deck sloped down to starboard and aft in such a manner that a ball
uld roll toward the starboard quarter or a little more aft. He found
ole in this deck, which he supposed to be the berth deck.

The hole was about 6 or 7 feet from where his feet first touched on
berth deck. The wood was all broken at the edge of the hole. He
t lowered himself down over the edge. He reached out with his arm,
t didn't find the other edge of the deck opposite the break. He went
wn 10 or 12 feet, perhaps a little more, and then his feet struck in
coal. He reported that there were tons of coal down there. He
en moved to port and found a fore-and-aft bulkhead. This bulkhead
d rivet holes in it from which the rivets had been pulled. He put
fingers in the rivet holes, and hauled himself up about 6 or 7 feet
til he reached the top of the bulkhead. I asked him how he judged
distance, and he said he put his hands up three times, and the fourth
e he got hold of the upper edge of the bulkhead. The upper edge was
gged, and the break was clean, meaning that the edge was approxi-
tely horizontal.

He climbed over this bulkhead, and went outboard. Across the top
this bulkhead he found a plank. This plank was about a foot wide
d the end edge was beveled off about 45 degrees. He went down on
other side of the bulkhead—outboard side—and found lots of small
npartments about 3 or 4 feet apart. The upper part of the compart-
nt he was in was large and the bottom of it was divided into small

compartments. The outboard side of these compartments curved like the ship's side in the sketch, which he drew for me. sketch showed the portion of the ship's side and fore and aft v bulkhead. There was a floor plate with lightening hole in it went up the lower angle between the ship's side and the bulkhea

The plates with the round lightening holes in them were loose, of them, from the curved side of the compartment, and were b toward the vertical bulkhead. He then walked with the vertical head on his right side, and walked forward over four or five of small compartments. He then struck his helmet against some and climbed back over the vertical bulkhead to which he had ref and got into some 10-inch powder tanks, one of which he sent up line. I examined this tank and found that one end of it was sti cular in form. This was the end to which the cover was atta The other end looked as if it had been struck on the side and flat together at right angles to its length. It was very much batter found in a tear in this tank a piece of the tape sewed on the p bags to support them. Rundquist told me that when he bent a l the tank, it had a bag in it. This bag probably fell out on the w He then went farther forward and got tangled up among a lot of tric wires. This was 5 or 6 feet forward of where he found the 1 powder tank. I asked him what the water looked like at this for I thought he had walked outside the ship forward into th which is apparently all blown away. He told me that where h the water looked pretty clear, meaning there was more light ther there had been inside the ship. He then came up, back throug hole in the berth deck.

Rundquist went down again on the afternoon of March 1. him orders to examine the side plating under the waterways port side, abaft the port crane, and also to examine the armo and any details of interest he might find at the point where th appears to be broken about frame 41. He went down as before port side and examined the strip of side plating attached to the ways, and found that the break in the side plating extended as as the after boat cradle, abaft the port crane. He then lowered h down over the side until he felt the armor. He had his body out the ship, and his arms over the armor plate. He said the plate l normal. He followed the armor plate along until he came to th of it. I asked him about how far, and he said it was the lengt plate and a half. I asked him how he could distinguish the ends plates, and he said that at the place where the plates abutted tog the outer surfaces were not flush, that the outer aft corner of t ward plate was about 4 inches farther outboard than the upper fo edge of the after plate. He then followed this seam down to th tom of the armor plate and found the plates were flush at the b He then went up the seam to the upper edge of the armor and w his way forward until he came to the end of the armor plating.

This armor ended a little forward of the port crane. He then down to the lower edge of the armor plate and found the edge a foot in the mud. He said the forward plate looked to be about original position. He went out about 12 feet from the ship's sid ing to find any of the plates. He found some old pieces of ti appeared to belong to air conductors, and a piece of wire which h up. This wire was lead covered and had a junction box attached found some small pieces of coal and some small pieces of plating the size of his hand. He found no large plates. He then went

to the ship's side and examined the backing of the armor. That looked to be pushed from out in, because at the place where the plate was gone the wood backing, about 6 or 7 inches thick, was splintered, and all the splinters pointed inboard. He examined the top of the wood backing level with the armor plate. He drew me a sketch of its condition.

The backing was split in a fore and aft vertical plane, and the inboard part of the backing was torn off. The outboard part of the backing was still attached to the plate. The splinters were on the forward edge of the backing and pointed inboard, as he indicated in a sketch. These splinters were about 6 or 7 inches long, and pointed inboard, as he drew them, at an angle of about 45 degrees. He went over all the work two or three times to make sure, and is positive there is no plating attached to the main deck forward of the break in the ship's side, to which he referred, at a point aft of the crane equal to the length of a plate and a half of armor, with the exception of the strip from 3 to 4 feet wide, running along under and parallel to the waterways.

He sent up a splinter from the backing, on which he had measured the thickness of the armor plate, by cutting nicks in it with a diver's knife. I measured these distances with a ruler, and found them to be 12 and 8 inches.

By the COURT:

Q. Twelve at the top and eight at the bottom, I suppose?

A. Yes, sir. He then came up, and to make perfectly sure of what he had reported, I sent him down again to examine the strip of plating under the waterways more closely. He said he found that way aft, a short distance forward of the turret, side plating was bent out. At this point he slipped from the ship's side and fell out into the mud. He worked himself back to the ship, feeling around in the mud, but did not find any plates. The strip of plating at the waterway he found ragged on the edge. He then came up.

Rundquist went down again the forenoon of March 2. This time he went down on the port side, forward of the port crane, where the break in the ship occurs. He reported that he got in among a lot of wreckage which he could not distinguish. He found some empty powder tanks, 6-inch and 10-inch. Some of them were in pretty good condition. He found rags in three; the others he reported were opened up at the seams. He found one 10-inch tank with only the cover gone. He said there were lots more rags lying about, but it was so dark he could not be positive whether they were powder bags. He walked around and got into a place where there was lots of canvas rolled up. He found a plate standing in the mud on a slant, the upper edge pointing inboard. One side of it was white cork paint, the other was slippery and looked green. The cork side was to port.

On the afternoon of March 3 I sent Rundquist down on the starboard side to make an examination there, similar to the one he had made on the port side. He went down first under the supports of the conning tower as they now are. He went directly down into the mud, and then walked in toward the ship's side. The mud was about 2 feet deep. He found the ship's side at that point intact, and followed it forward until he reached the end of his guide line. He made the guide line fast to a piece of coal, put it in the mud, and followed the side along about 10 feet more, until he came to the break in the ship. I was unable to determine his exact position by the bubbles on account of the wreckage of the superstructure and other plates, which deflected the bubbles and made them come up at widely different places in a very

short space of time. The edges in the break were all ragged and loo as if they had been broken between two frames.

The edges were bent neither in nor out, but presented a rag appearance. He then took hold of the break, which was vertical, pulled himself up 6 or 7 feet. There the break turned and went a a horizontal line about 2 feet. The forward corner of the plate—u part—at the break was bent down and aft. This horizontal top was not ragged, but had rivet holes in it. This was level with bottom of the armor. He then found the armor and crawled vertic up along the forward edge. He found the wood backing projected ther forward than the armor plate, and in it he found two bolts. ends of the bolts were smooth and appeared not to have been br off, and had screw threads. There was a washer on the bolt that like rubber. He felt forward of the armor for about a foot and a and found the wood backing, but could not feel the end of it. He climbed up until he got to the top of the armor and worked hin aft, hanging on it with his arms over it and his body outside the s

He went aft for about 12 feet. Then his hand slipped, and he down in the mud. He worked himself forward again to the brea the ship's side, and worked himself up and over the same corne before. He found that the bottom of the armor was about 12 feet al the mud at the place where the break occurred. He worked hin back along the top of the armor as before, and at about the same p slipped again. He put his hands over the armor going back and fo a foot of armor and 6 or 7 inches of wood, if not more. He did have a measure with him. There was something beyond the wood, he did not have time to examine it. When he slipped from the sid went out about 12 feet in the mud. He found pieces of plating, w he took for side plating. One side was slippery and the other ro It was so dark he could not distinguish colors. The slippery side down and about horizontal. The plating was a little curved, and concave side was up. He then looked for the end of his guide line, when he found it, went up. He found a great deal of coal in the n

I sent Rundquist down again in the afternoon of March 4 to go the same ground. He went down near the conning-tower support before, and got into the mud and walked into the ship's side. He lowed it forward until he came to the break. I was able to disting the bubbles more clearly at this time, and concluded that the brea the ship's side was at the same frame as the frame on the port si about frame 41. He climbed up the vertical break until he cam the corner, which is bent over as he described before. He follow a couple of feet until he struck the forward edge of the armor p He climbed up the forward edge of the armor plate and examined backing as he went up. The backing extended fully 5 feet far forward than the armor plate. The splinters on the forward edg the backing pointed outboard. Then he went up on top of the ar and crawled along about 4 or 5 feet until his helmet struck against something which looked like athwartship bulkhead, pai white. It extended above the armor, and the upper part was forward. It had an angle iron on the outboard edge, after side.

There was a fore and aft vertical plate riveted to this angle iron at r angles to the bulkhead he had just mentioned. He said he was this did not belong to the outside plating. He went farther aft for two lengths of an armor plate. I asked him how he could tell the en the plate, and he told me that the ends of the plate were not flush a top; the forward plate was about 4 or 5 inches farther out from the

the after one, but they were flush at the bottom. He could not
rther aft than two plates' length, because there was a lot of wreck-
from above hanging over him, which seemed to be a part of the for-
d wreckage of the superstructure. He said as he worked aft the
or projected about 6 inches farther out than the side plating above
He was not able to determine exactly the distance to which the side
ing above the armor was blown out, on account of all the wreckage
r the main deck on the starboard side.
he armor stuck out this way about 6 inches all the way aft to where
found the wreckage which he has just spoken of. He then went
rard again until he got nearly to the break in the ship's side at the
or belt, and then he went over inside the armor and found what he
t to be a deck with two plates riveted together. He is sure the
l thickness of both plates together was not more than an inch.
se plates were painted reddish brown. The plate was a little curved
extended inboard horizontally about 2 feet, and was then broken
with ragged edges bent down. This plate was flush with the top
e backing. He then went forward to the end of the armor plating,
e the break occurs, and made his guide line fast to one of the bolts
g through the wood backing. Then he lowered himself down inside
ood backing. He found a number of pieces of board, planking,
oal, and plates. The boards were about 2½ inches in thickness.
uld not distinguish the color.
ide he found a vertical fore and aft bulkhead, about 4 feet
the wood backing. He found athwartship bulkheads about 4
part and states that he could find no holes in them, and thinks he
a pocket of some kind. He found some pieces of inch piping in
ompartment. He hauled himself up again on the line, and then
ver the side at the break of the armor belt, and went down in
d and found the side plating underneath where the armor plates
re missing had been, and found where it had been torn down in
ical line and bent out nearly horizontally, and the extreme out-
end bent vertically down in the mud. He scraped away the
s far as he could, but could not find the end of the plating. He
a small pipe attached to these plates, made of composition, three-
s of an inch in diameter. He sent this pipe up. He felt in the
nd found a great many pieces of broken crockery, and found six
plates all together. These were about 15 feet from the ship's
he also found a 10-inch powder tank with rags of powder bag
. He sent the tank up. I examined the tank and found that it
reserved its cylindrical shape, but the head and bottom were
g. Otherwise the tank was practically uninjured. He sent up
g. He found this tank about 15 feet from the ship's side. This
as ragged in appearance, but on being opened up presented a
foot or more of intact surface.
Were there any signs of fire?
I could not tell whether it had been burned or not. The sup-
g tapes were ragged and were blackened. Everything down on
ttom looked as if the insides of the ship had been blown right
starboard. He found coal wherever he went. He went out
20 feet, but believes the coal goes out much farther. I then
him how this condition compared with what he found on the port
posite the break, and he told me at that point there was no coal—
g but mud. That concludes my testimony with reference to the
of Rundquist.
he afternoon of March 2 I sent Schluter down on the port side

forward of the break. I told him to see if he could find any of the armor of the ship. He went down about 30 feet forward of the port crane and landed on what he thought was a deck light. He said there were planks about it running in athwartship direction. This was about 15 feet from where the ship's side would have been. He felt all around among the wreckage, but did not recognize anything until he found the armor plate, to which he attached a line. He measured the plate with a ruler. This plate stood on an angle with the thick armored side forward. He measured this plate and found that the part which he called the thick armored side was 6 inches in width. Behind that he found 9 inches of wood backing, and behind the wood backing he found 3½-inch plate of armor. The bolt-head came out of this 3½-inch armored side. I plumbed this plate with a line which he attached to it, and found it in line with the mainmast and port crane, about 40 feet forward of the crane, inside the line of the ship.

I sent Schluter down on the morning of the 5th and told him to examine the plating on the port side abaft the crane, just under the main deck. He went over the side to fore and aft above the port crane and felt the side plating. The main deck sloped down to starboard. The outside plating was bent sharply from outside in, making an acute angle at the waterway. Then he crawled away aft and felt over the edge, and in places could not find any side plating attached to the end of the waterways. He went as far aft as the turret. He said the plating about 10 feet forward of the turret is broken right out. A little forward of that was another plate, blown up and out.

Q. On the starboard side?

A. On the port side, sir. This had beams fast to it and looked like a deck. Forward of this plate for about 7 or 8 feet is wreckage inside the line of the ship. It looks as if it had been blown outboard to port. He then crawled along the top of the armor, which was all clear as far forward as the crane, and there it is broken clear off.

Q. What is?

A. The armor.

This is corroborative of the testimony of Rundquist. Just at the break of the armor about 8 inches inboard from the armor the wood backing is blown up and inboard.

Q. Which deck is that?

A. I take that to be the berth-deck, as that was the upper edge of the armor. That covered the protective deck. He did not examine the strip of plating under the waterway farther aft than 10 feet from the crane, but all that he felt was blown inboard. That is as much of the diver's statements as I have up to the present time.

By the JUDGE-ADVOCATE:

Q. Mr. Powelson, look at the sketch you have presented the court of the frame plates and broken keel of the ship. When you look at A, is that in the inboard side of the ship?

A. That is the inboard side of the ship, between frames 26 and 17, and is broken off between the first and second logitudinals and between the second and third longitudinals, embracing a space of about two longitudinals between frames.

Q. Now, the right-hand edge of this plate, as you see it—where would that be if the plate was bent back into its original position?

A. It would be the lower part of the plate—the garboard strake.

Q. And the left-hand edge—what would that be?

A. The upper part of the plating.

Q. And the longitudinal which is marked on Plate A—which longitudinal is that?

A. The second longitudinal, from keel, on the port side.

By the COURT:

Q. That would be this one [indicating on sketch]?

A. Yes, sir; the second one.

By the JUDGE-ADVOCATE:

Q. Looking at plate B, on the sketch, the face which you see there, is that in the inboard side of the ship?

A. It is.

Q. What longitudinal is that marked on this plate?

A. This is a part of the third longitudinal.

Q. If this plate was put back into its original position, in which direction would the right edge be?

A. The lower edge.

Q. And the left edge?

A. That would be the upper edge.

Q. And the dark part marked "D," between plates A and B, what is that?

A. Outside of the outer skin of the ship.

Q. That is painted green?

A. It is.

Q. And above plate A there is a place torn in the keel of the ship, where the keel goes downward. About what frame is that?

A. Between frame 17 and 18.

Q. And how far down does this keel go in the vertical position it now has, between what frames?

A. Between frames 22 and 23.

By the COURT:

Q. Where is the 6-inch shell room, the forward 6-inch shell room, on that keel?

A. The forward 6-inch shell room rested on the upper half of the vertical part of the keel, as shown.

Q. And the fixed ammunition room, where was that?

A. Right over the angle of the keel, at frame 22 and 23.

Q. Where would the 10-inch shell room have been?

A. The 10-inch shell room and magazine are on the flat part of the keel, marked "C."

By the JUDGE-ADVOCATE:

Q. How much plating is there attached to the keel, which is up and down on the sketch, do you know?

A. I could not state that definitely. You might ask Smith or Olsen about that.

Q. But the horizontal keel which is marked "C," has the ship's side attached to it for some distance on the starboard side?

A. The inner skin is for some distance on the starboard side, but through a crack in the inner skin, the diver found the outer skin, but as to the full extent, it would be pretty difficult to find out, on account of all the wreckage thrown down around it.

By the JUDGE-ADVOCATE:

Q. Did you locate that four-way pipe?

A. Yes, sir.

Q. Where was that originally, according to your deduction?

A. Between frame 17 and frame 18.

Smith says he measured 21 inches from the midship line t flange, and that agrees with the drawing.

There being no further questions to ask this witness to-day, h directed to come before the court at 10 a. m. on Monday next.

The court then (at 3.40 p. m.) adjourned to meet Monday, Ma 1898, at 10 a. m., on board the U. S. L. H. tender *Mangrove*, hart Havana.

SPECIAL SESSION.

The court reassembled at 5 p. m. to take some additional testi of the captain and first officer of the *City of Washington*, which sail to-night.

Present: All the members of the court, the judge-advocate, an stenographer.

First Officer GEORGE CORNELL, of the *City of Washington*, app as a witness before the court, and was duly sworn by the preside

Examined by the JUDGE-ADVOCATE:

Q. Please state your full name and profession.

A. George Cornell, first officer of the steamer *City of Washingt*

Q. To what line of steamers does she belong?

A. The Ward Line.

Q. Were you on board the *City of Washington*, in the harb Havana, on the night of the 15th of February, when the *Maine* blown up?

A. Yes, sir.

Q. What part of the *City of Washington* were you in?

A. I was standing amidships, on the starboard side.

Q. On the upper deck?

A. On the upper deck; yes, sir.

Q. Were you looking right at the *Maine*?

A. Yes. sir.

Q. Will you please state what you heard and what you saw?

A. Yes, sir; I was standing on the gangway, and giving the qua master orders to call the men at 5 o'clock in the morning. While I standing there I heard a rumbling sound, and we saw the *Maine* up forward. After that the explosion occurred, and the stuff wa ing in the air in all directions. She sank immediately at the for end, sir.

Q. At the first noise or rumbling did anything fly up, or did she lift?

A. The ship lifted.

Q. Forward?

A. Forward; yes, sir.

Q. What interval was there between the rumbling noise and th plosion?

A. I think there must have been about sixteen or eighteen secon not a full minute.

Q. That is, a long time?

A. Almost immediately; there was not very much of an interva

Q. What part of the ship did the explosion come out of wher saw it?

A. Amidships.

Q. Was there much flame coming up?
A. There was not much flame.
Q. Did a large piece of cement drop on your deck?
A. Yes, sir.
Q. Can you identify it?
A. Yes, sir.
(A large piece of cement was brought into the court room and showed to witness.)
Q. Is this the piece of cement?
A. Yes, sir; that is the piece of cement. A small piece has been cut off at one end.

By the COURT:

Q. How were you anchored with reference to the *Maine?*
A. We were anchored fast to a buoy.
Q. But what direction was the *Maine* from you?
A. The *Maine* was lying on her starboard side, sir. We were off the port quarter of the *Maine.*
Q. How much did she lift at the first sound you heard?
A. She lifted most nearly all out of water. She raised up considerably, but it was kind of dark, and how high she lifted up I couldn't exactly say. We saw her raising by her lights.
Q. The next thing you saw was the débris?
A. The débris; yes, sir.
Q. Did you see any water thrown up?
A. No, sir; I don't think so. I only seen these large pieces flying in the air close by where I stood looking over the rail. We couldn't get out of the way of the débris, and it fell on the deck and all over us.
Q. You could not tell whether you saw her ram or not when she was lifted up?
A. No, sir; it was too dark to see that.
Q. You say she raised almost out of the water forward?
A. Yes, sir.
Q. You can not say how much she raised?
A. No, sir; I could not.
Q. There was a very decided interval between the first sound you heard and the explosion, was there?
A. Yes, sir.
Q. There was a very decided interval, was there?
A. There was not much. Between fifteen and eighteen seconds. It might have seemed to me longer than it really was. It was immediately after the rumbling noise.
(The president of the court produced a watch and counted the seconds. The witness stopped him at the third second, saying the time was less than that.)

By the JUDGE-ADVOCATE:

Q. The interval between the two was decided?
A. Yes, sir.

By the COURT:

Q. Did you feel anything?
A. Yes; the ship was kind of shaking.
Q. When did you feel that?
A. Right after the rumbling sound.
Q. Before the explosion?
A. At the same time the explosion happened.

There being no further questions to ask the witness his testimony was read aloud to him by the stenographer and by him pronounced correct. Whereupon he withdrew.

Capt. FRANK STEVENS, of the *City of Washington*, appeared as a witness before the court, and was duly sworn by the president:

Examined by the JUDGE-ADVOCATE:

Q. Please state your full name and profession.

A. Frank Stevens, master mariner.

Q. You are captain of the steamer *City of Washington*, Ward Line?

A. Yes, sir.

Q. Were you in the harbor of Havana last month when the *Maine* exploded?

A. I was.

Q. Were you at that time in command of the *City of Washington?*

A. I was.

Q. How far were you anchored from the *Maine* at the time?

A. About 300 feet.

Q. In what direction was your ship from the *Maine?*

A. We were on the *Maine's* port quarter, nearly astern.

Q. Nearly astern?

A. Nearly astern; yes, sir.

Q. Where were you at the time this happened?

A. I was standing along amidships, abaft the smokestack on the port side, where I could look through between the smokestack and forward end of the midship deck house, toward the *Maine.*

Q. Please tell the court what you heard and what you saw.

A. I heard a dull, muffled explosion, and commotion, like as though it was under the water, followed instantly by a terrific explosion, lighting up the air with a dull red glare, filling the air full of flying missles which lit all around us. We were struck, I think, in four places.

By the COURT:

Q. By the fragments?

A. Yes, sir; and I could hear it dropping into the water the other side of us. After getting out the starboard forward boat we found there was a hole in it, and got the port one out. I noticed that the water on the port side of us was full of floating wreckage from the *Maine.* I got out three boats, two quarter boats and the port forward boat, and sent them out in charge of officers to save lives.

Q. Did you feel any trembling of your own ship at either of these explosions?

A. The last one I did, but the first one I did not. Everything shook.

Q. Was there a very decided interval between the first noise and the explosion?

A. There was.

Q. Were you looking at the *Maine* at the time of the first noise?

A. I was.

Q. What did the *Maine* appear to do?

A. My first impression was when I heard this noise that it was a gun or a salute, but that changed instantly, and then it flashed across my mind that there was dynamite under the bottom of that ship. That was my impression.

Q. Did you see the *Maine* lift at all?

A. I did not, I being on the opposite side and looking through. I seen the mainmast and part of her outline, but could not see her lift.

There being no further questions to ask this witness, his testimony was read aloud to him by the stenographer, and by him pronounced correct.

The court then (at 5.20 p. m.) adjourned to meet Monday, March 7, 1898, at 10 a. m., on board the U. S. light-house tender *Mangrove*, harbor of Havana.

ELEVENTH DAY.

U. S. L. H. TENDER MANGROVE,
Harbor of Havana, March 7, 1898—11 a. m.

The court met pursuant to the adjournment of Saturday, after having proceeded in a body to the wreck to make a personal inspection.

Present: All the members of the court, the judge-advocate, the stenographer, and Captain Sigsbee.

The record of the proceedings of Saturday was read and approved.

Chief Engineer HOWELL, a former witness, was then recalled, and cautioned by the president of the court that he was still under oath taken.

Examined by the JUDGE-ADVOCATE:

(The piece of cement here brought into the court on Saturday and identified by the first officer, Cornell, was then shown to the witness).

Q. Will you examine this piece of cement and identify it if you can?

A. I saw that piece of cement on the *City of Washington*, and now identify it as the same piece. My opinion is that it was blown from the *Maine*, and came from underneath the berth-deck blower on the port side.

Q. Upon what do you base your opinion?

A. That blower was not placed at right angles to the bulkhead on the forward side, and this piece of cement shows marks of an angle similar to the acute angle, which is the base of the blower.

Q. Is it not a very heavy piece of cement for the base of the blower?

A. I do not know exactly how this cement was, but I believe it was 2½ inches thick, similar to this. I mean to say, I do not know how thick that cement was, but this piece is about 2½ inches thick, and that is a very reasonable thickness to put either. The cement has also indications of oil on both sides of it, and I also know that that cement had oil on the under side, because I have seen oil drop through from that deck down into the bunker underneath. This cement showed oil on both sides while on the *City of Washington*. The marks of rivet heads on this cement and the imprint also of the angle iron and the running in line, similar to the acute angle I have spoken of before, which is also another indication that it came from the bottom of that blower. I should say that the top and bottom sides are parallel.

Q. There is a set of photographs of 12 views on the table here. Can you inform the court how they were obtained?

A. I received orders from the commanding officer to instruct the photographer of the 12 views that were desirable, and was with the photographer when he took about 8 of these views. After that time there were so many boats around the wreck that I could not get the views that were wanted, and the whole set of 12 was then made up from plates which the photographer had already taken.

Q. Would you be able to get *photographs*—starboard view and port

view—of the three projections above the water, of wreckage, which are forward of the superstructure, the three together, and the three separately?

A. Yes, sir.

Q. Will you consult with Captain Sigsbee and receive orders to that effect?

A. Yes, sir.

By Captain SIGSBEE:

Q. You are a photographer yourself, are you not?

A. I have done a good deal of work in photography; yes, sir.

The JUDGE-ADVOCATE. I request that the above photographs be appended to the record and marked Exhibit I.

The request was granted, and the said photographs were appended to the record marked Exhibit I.

There being no further questions to ask this witness, his testimony was read over to him by the stenographer and by him pronounced correct; whereupon, after being cautioned by the president not to discuss matters pertaining to the inquiry, he withdrew.

Ensign W. V. N. POWELSON, U. S. Navy, a former witness, was then recalled, and cautioned by the president of the court that he was still under oath taken.

Examined by the JUDGE-ADVOCATE:

Q. Have you read over the testimony which you gave before this court on Saturday last?

A. Yes, sir.

Q. Is it correct as recorded?

A. Yes, sir; with some exceptions which I have noted.

Q. Will you please give the corrections to the stenographer?

A. On page 453, fifth line from the bottom, insert "to" before "starboard" and "at" before "quite."

Page 456, fourth line, "I would say" should be "He said."

Page 460, twelfth line from the bottom, change "apart" to "from the keel."

Page 463, last line, insert after "the" "mud at the."

Page 465, tenth line from the bottom, "far aft" should be "fore and aft."

Page 469, eleventh line, insert "the" between "turret" and "side."

Page 476, tenth line, change "to fore and aft above" to "a little baft."

Page 477, third line, change "backing" to "planking of the deck."

Same page, thirteenth line, "between the first and second longitudinal" should be "between the keel and first longitudinal."

That is all.

Q. Is the testimony, as now amended, correct?

A. Yes, sir.

Lieut. Commander RICHARD WAINWRIGHT here entered the court.

The JUDGE-ADVOCATE. Mr. Powelson, have you any further testimony to offer of the nature that you gave on Saturday last—that is, testimony derived from what was reported to you by divers?

Mr. POWELSON. Yes, sir; I have the work of Olsen on Saturday morning.

By the JUDGE-ADVOCATE:

:. Please give it.

.. On Saturday morning last, March 5, I sent Olsen down to the ›e of the keel—the vertical keel—which is now vertical, with instruc- ıs to make further explorations in the region of the 10-inch magazine. went down to where the keel becomes horizontal at frame 23. Then walked aft about 25 feet, climbed over a lot of wreckage consisting ılates or bulkheads standing upright. The upper ends of these plates e ragged, and he crawled over them and on the other side found ıt he thought was part of a boiler.

asked him how he could distinguish the boiler; whether there was · of its original shape or not, and he could not give me any definite ails, but said from the general look of the piece of wreckage he ıld take it for a boiler. He went a little farther aft from this, which considered a boiler, and walked out to port, clear of the ship, into mud. He was at this time forward of the break of the ship at me No. 41. He found nothing in the mud and came back, walking to rboard. About 10 feet in he found some wreckage. He examined ; plate and found that it was curved as if it were a part of the side ting. This, he said, was about 10 feet inboard of the side of the ship. did not lay exactly fore and aft; it pointed toward the starboard r. It was so dark he could not distinguish the color. He walked on top of the plating and found all the edges rough. From the top the plate he found a horizontal plate about 2 or 3 feet wide, and in ›rner some cellulose packed in tightly. He said the compartment med to be about 2½ or 3 feet wide. Abaft that he found something › a boiler. It was very black, all crushed up, and he could not ognize any definite form. He was not absolutely sure that it was a ler.

Ie went forward from this point about 10 feet and found some loose eckage, and he lifted up a couple of plates and threw them aside. felt around and found a 6-inch tank. He found it intact. He lifted ınd found it was heavy, and sent it up. This afterwards proved to a full tank. He found a lot of broken tanks split up on the seams, d in one tank, at the cover, which has holes in it, he found a lot of mud ıich he brought up, and which he said looked like dissolved powder. › said there was any quantity of similar mud in the same place. The ıd around the tanks was very dark in color, but the mud outside, rming the bottom of the harbor, is of a gray color. He also found a ate of angle iron and U-bar stiffeners riveted to it, about 1 foot apart.

Q. Is that all of this nature?

A. That is all up to this morning.

Q. What side did he go down when he found what he supposed to be broken boiler?

A. He found the boiler first in the midship line, and then walked to ›rt.

Q. Where did you locate Olsen, when he found the full 6-inch tank?

A. I was at that time on board the *Mangrove.*

Q. Have you any further testimony to give?

A. No, sir.

By the COURT:

Q. Did Olsen mention the thickness of this wreckage which he sup- ›osed to be the boiler?

A. No, sir; he said it was without shape, and he could not distin- guish anything about it.

Q. Do you know the thickness of the *Maine's* boilers?
A. I do not.
There being no further questions to ask this witness, he was directed to hold himself in readiness for further evidence and to read over the evidence just now given. Whereupon he withdrew.

Chief Engineer HOWELL, U. S. Navy, a former witness, was then recalled and cautioned by the president of the court that he was under the oath which he had previously taken.

Examined by the JUDGE-ADVOCATE:

Q. What was the thickness of the *Maine's* boilers—the shell
A. About $1\frac{1}{8}$ inches.
Q. All over?
A. All the shell.
Q. What is the thickness of the heads?
A. They were approximately the same. Some parts of the heads were different.
There being no further questions to ask this witness, his testimony was read over to him by the stenographer, and by him pronounced correct; whereupon he withdrew, after being cautioned by the president not to discuss matters pertaining to the inquiry.

Gunner's Mate RUNDQUIST, U. S. Navy, a former witness, was recalled and cautioned by the president of the court that he was still under the oath which he had taken.

Examined by the JUDGE-ADVOCATE:

Q. Since you gave your last testimony, have you done any more diving at the wreck of the *Maine?*
A. Yes, sir.
Q. To whom did you report the results of what you had found when you came up out of the water?
A. Ensign Powelson.
Q. Referring to the reports that you made to him—were they strictly correct as if you had been under oath?
A. Yes, sir.
Q. You went down on the forenoon of March 1. Do you remember going down the ladder on the port side?
A. I went down the ladder on the port side of the *Maine.*
Q. Did you find anything made fast to the waterways?
A. I found a piece of the side plating.
Q. You then went on to what you supposed to be the berth deck, did you not?
A. Yes, sir.
Q. Which way did it slope?
A. It inclined aft and to the starboard side.
Q. Did you find a hole in the berth deck?
A. I found a hole; that is, it looked to me to be a hole.
Q. How large?
A. I could not say how large it was.
Q. Was the wood broken at the edges?
A. Yes, sir.
Q. You then went farther down?
A. I went farther down.
Q. What did you find—do you remember?

A. There was a lot of coal, in the first place. I sent a big piece of al up.
Q. What part of the ship do you think you were in then?
A. I should judge I was in the port side of the ship, and in one of e coal bunkers. There was lots of coal—two or three feet deep.
Q. How far forward or abaft the crane were you?
A. I must have been on the forward part of the crane.
Q. Was this coal outside of the ship or inside of the ship?
A. Inside of the ship.
Q. None of it had been blown out?
A. No, sir; at least, I could not say not.
Q. You found a vertical bulkhead about this time did you not, on ur right side, walking forward?
A. Yes, sir.
Q. What did you do?
A. I examined this bulkhead. I believe I went over it.
Q. Did you strike your helmet against something?
A. I struck my helmet against something, and it prevented my ing forward in that direction.
Q. What did you find about this time; do you remember?
A. I believe that is the time I found some powder inside a tank.
Q. What kind of a tank?
A. Ten-inch tank.
Q. Did you send the tank up?
A. Yes, sir; I sent up a tank with what looked to me to be powder ags.
Q. Did the bags fall outside the tank when you sent it up?
A. The men that received it said that they fell out.
Q. You then got tangled up in what?
A. I then got tangled up in a line.
Q. What kind of a line?
A. A line that was leading down.
Q. Did you not find a lot of wires—a lot of electric wires?
A. Yes, sir; about fifty of them in a bunch. That was as much as I could take in two hands.
Q. You went down again on the afternoon of the same day?
A. Yes, sir.
Q. As before?
A. In the same place, sir.
Q. How far aft did you find that the break in the side plate extended?
A. I could not say exactly how far aft from above it was, but I followed the armor plate, and it extended for fully two lengths of the armor plate aft.
Q. What do you call the break in the ship—where?
A. Where the ship was blown apart.
Q. What part of the ship was that?
A. That was where the armor plate ended, on the forward part of the ship.
Q. Can you describe about what part of the ship it was, what you call a break?
A. I could not say exactly; but it was where the ship had been blown up.
Q. Do you mean about opposite the forward part of the middle superstructure, as it was?
A. I should say it was forward of that.
Q. Did you crawl with your *arms over the armor*?

A. No, sir; I was outside the armor, and was walking with my hands on top of the armor plate.

Q. You informed Mr. Powelson that you had gone a certain distance and a certain number of plates. How could you tell that?

A. I could tell by that the two plates had been joined together. One plate extended further out than the other.

Q. Which plate was the one that was farther out?

A. The forward one; the one that was closer to the break.

Q. About how much out were they?

A. About 5 or 6 inches.

Q. In your dive on this occasion you found some pieces of tin with wire attached?

A. I found some wires; I sent some of them up. There was a long string, about 15 feet, of heavy wire.

Q. After you sent that wire up, I understand, you examined the back of the armor plate. What condition did you find this backing then?

A. The end was all twisted and torn and ragged edges; and then they all looked and pointed inboard. I also examined the upper part of the backing and found the inside corner of it was gone.

Q. Did you send a splinter of this backing up?

A. Yes, sir.

Q. Did you measure the armor plate by this splinter?

A. I did, sir.

Q. Top and bottom?

A. Top and bottom.

Q. How could you measure the bottom?

A. The lower edge of the armor plate was a foot beneath the mud, and I could stick my hand beneath it.

Q. Then there was no plate of the ship under the armor plate?

A. This was just at the first break of the armor belt, and there was no plate left underneath of it. There was nothing of the ship's side left. This was just at the end of it.

Q. How much of the armor plating had no ship's plate under it?

A. I could not say, because I did not measure.

Q. How much do you think?

A. I felt a couple of feet and there was nothing there left of it. Fore and aft there was side plating standing, but I do not know how far it extended.

Q. You went down again the next forenoon?

A. Yes, sir.

Q. Do you remember where?

A. I believe I went down on the same place on the port side.

Q. Are you sure you did not go down forward of the port crane?

A. I may have gone down forward of it, but it was on the port side.

Q. You found the powder tanks on this occasion?

A. Yes, sir.

Q. Please describe them.

A. They were all pressed in, and I also found some powder bags. I put this powder bag in a pocket of my overalls for fear of losing it. I was trying to send this tank up, but it got afoul of something and so I let it go. I left it down there.

Q. Do you remember in how many you found rags?

A. I found rags in three or four of them.

Q. Did you find any 10-inch tanks with the covers on?

A. Yes, sir.

Q. What were these tanks, what size, 6 or 10 inch? Can you state about how many?

A. I could not say how many, because there were tanks and pieces of tanks all around. I could not say how many there were.

Q. What do you mean by pieces of tanks?

A. Tanks pressed together. They feel very small down there.

Q. Then you mean tanks which do not have their shape as well as others?

A. Yes, sir.

Q. You then got among a lot of canvas?

A. I got among a lot of canvas all rolled up. It must have been a sail locker.

Q. Did you find a plate standing in the mud at this time?

A. Yes, sir.

Q. Please describe it.

A. I found a plate standing on the edge down in the mud. I believe I went over this plate and I got down along the hole, which looked to be an inner passage or double bottom. It may have been an inner passage, and a lot of compartments and sections, like. The compartment had a big, round, circular hole in it.

Q. This one plate which I referred to, did it have cork paint on it, on one side?

A. Cork paint on one side and on the outside it was slippery.

Q. Was the cork paint to the port or starboard?

A. It was to starboard.

Q. Think again.

A. The slippery side was to starboard and the cork paint to port.

Q. You went down again on the afternoon of the 3d of March, on the same day?

A. Yes, sir.

Q. On which side?

A. Starboard side.

Q. Abreast of what?

A. Abreast of the crane and wreckage, a little forward of the wreckage.

Q. Abreast of the conning tower?

A. Abreast of the conning tower, sir.

Q. What did you drop into?

A. I dropped into a lot of wreckage, pieces of the ship.

Q. Did you not drop into the mud first?

A. Yes, I walked toward inboard of the ship, and got in amongst a lot of wreckage.

Q. How did you find the ship's side at this place?

A. I did not find the ship's side at that time, because I got fouled twice and got pulled up, and then I went forward and aft on the starboard side, from the whaleboat, and dropped down into the mud and walked into the ship's side, and followed that until I came to the break.

Q. Which side were you on then?

A. On the starboard side of the ship.

Q. Where did you find the break on the starboard side?

A. A good way forward. I could not say how many feet. I came to the end of the guide line, and made the line fast to the piece of the keel and followed the ship's side until I came to the break.

Q. Will you please describe the break as you found it?

A. This break was vertical, and with ragged edges. I climbed up the edge until I got to where it *went off in the* corner, where the lower

edge of the ram plate had been made fast to it. This extended 2 or 3 feet in that direction. The corner of this side plate was nearly doubled over, and bent outboard. I got to the ram plate and found lots of backing there, extending out 5 or 6 feet, and the bolts were left in the backing. This backing was all pointed outboard. I went up to the upper edge of the ram plate and followed it aft for some distance. I could not say how many feet. My hand slipped on account of not having a guide line. I went back to the same break and came to the same place, and slipped again. I did not make any more attempts that day, because I had not enough guide line.

Q. Can you locate this break that you have just described on the starboard side?

A. No, sir; I could not locate it here. When I found this break, I gave a signal on the line. The man told Mr. Powelson about it. He said, when I came up, that he could not tell where the break was, because the bubbles came up from underneath the wreckage.

Q. When you slipped down the second time did you slip into the mud?

A. Yes, sir.

Q. How deep?

A. Above my waist.

Q. How far, about, did you go?

A. I fell down close to the ship's side when I struck the mud.

Q. Did you find pieces of plate when you fell down into the mud?

A. Not where I fell; but I went outboard and forward toward the break, and found pieces that did belong to the ship.

Q. Were they curved?

A. They were curved.

Q. Which way was the concave side?

A. I believe it was up.

Q. You then looked for your guide line?

A. I did; in the meantime I got a signal to get up.

Q. Did you get amongst a lot of coal before you came up?

A. Yes, sir; there was a lot outside of the ship—a good way out.

Q. What do you mean by a good way?

A. Ten or twelve feet from the ship's side.

Q. You went down again in the afternoon of that day, March the 4th?

A. Yes.

Q. Near the conning tower, as in the morning?

A. As in the morning.

Q. You landed in the mud; and then what did you do?

A. I was walking in the mud until I struck the ship's side again. I went over and examined the break in the backing better than I did the day before. I went up the same way and followed up the part of the ram plate aft. I first struck against something that pointed up and forward. I was first trying to walk on top of the ram plate, but my helmet struck against this, so I had to walk on the side of it with my hands hanging over the ship's side. I went aft about the length of two plates, I should say, and then I got stuck. I could not go any further aft.

Q. Why?

A. Because there was lots of wreckage extending over the ship's side which prevented me

Q. Wreckage under the water, or dropping from above?

A. From above, and extending over the ship's side.

Q. Did you find a plate about this time—two plates riveted together?

A. Afterwards I found these two plates.
Q. How were they painted?
A. These two plates? They looked to be a red-colored brown.
Q. Was the plate curved?
A. Yes, sir.
Q. How far in did it extend in the ship's side.
A. It extended a couple of feet.
Q. Was it ragged where it had broken off?
A. It looked as if it had been carried away; as if something heavy had fallen on it.
Q. Was this plate flush with the top of the backing?
A. Yes, sir; I could barely lay the point of my fingers down there.
Q. You also found a number of pieces of board and planking at this time, did you not?
A. Yes, sir; I did.
Q. You sent up a pipe for examination?
A. Yes, sir.
Q. Where did you find it?
A. I found it made fast to the ship's starboard side—to the bottom plate. I broke it loose and sent it up.
Q. What else did you find about here?
A. I examined the ram plate and where the break was, and found the bottom plate of the ship down in the mud standing outboard. I was following up this plate, trying to find the armor plate, but could not get to the end of it. It looked to be rolled over, and was too deep for me to get hold of it.
Q. This was the plate underneath the armor plate?
A. Yes, sir.
Q. Was there any crockery about here?
A. Yes, sir; I found lots of crockery, pieces of washstands, clothes, and a 10-inch powder tank. I sent the tank up, and there were some power bags inside.
Q. You sent the bag up also?
A. I put the bag in my pocket and brought it up when I came.

The judge-advocate requested that the testimony given by the witness be not read to him by the stenographer, but that he be directed to hold himself in readiness to appear before the court, when he will be furnished with so much of the record as contains his testimony and asked to withdraw for the consideration of the same, upon the completion of which he will be again called before the court and be given an opportunity to amend his testimony as recorded or pronounce it correct. The request was granted, and the witness was instructed accordingly; whereupon he withdrew, after being cautioned by the president not to discuss matters pertaining to the trial.

Gunner's Mate SCHLUTER, U. S. Navy, a former witness, was then recalled and cautioned by the president of the court that he was still under oath which he had taken.

Examined by the JUDGE-ADVOCATE:

Q. Since you gave your last testimony before this court have you been engaged in any diving at the wreck of the *Maine*?
A. Yes, sir.
Q. To whom did you report the results of your diving?
A. To Mr. Powelson.
Q. Were your reports *as true as if they had* been given under oath?
A. Yes, *sir.*

Q. I believe you were down on the forenoon of Tuesday, March 2.
A. Yes, sir.
Q. Do you remember where you went down?
A. I believe that was the day I was down after some powder tanks.
Q. I refer to the time you went down on the port side forward of the break. You went down on the port side forward of the break, do you remember?
A. Yes, sir.
Q. Were you told to look for any armor?
A. Yes, sir.
Q. What did you find?
A. I was lowered over the side to the bottom of the ladder until I struck the main deck. The main deck sloped over toward the starboard side. Then I crawled right out straight to the port side of the ship and put my hand over the ship's side and felt the plates were bent inboard up to about 5 or 6 feet along the ship's side and the waterways. Then I crept on over some stanchions going aft on the port side and kept on going aft until I struck up against the after turret, and was crawling along when I made out two distinct plates of the ship's side. Both were bent from port side outboard. I was going to crawl out over one when the signal was made for me to come up on account of the wrecking tug which was going to move the smokestack.
Q. Did you not find the armor-plate, to which you attached a line?
A. That was the next time I went down, sir.
Q. Whenever you did find that armor-plate to which you attached a line, what did you do? Did you measure this plate with a rule?
A. That was the one amidship, which stands in a vertical position; vertical angle on its end. It was leaning a little over forward. The lower end was pointed aft.
Q. The thick side was forward or aft?
A. The thick side was in the mud, sir; the heavy side. I believe I found 6 inches on top.
Q. That is what you call the thick armor side?
A. Yes, sir.
Q. What did you find behind this plate?
A. A wood backing, sir.
Q. How many inches was this wood backing?
A. About 9 inches, I think.
Q. Behind that what did you find?
A. Three and a half inch armor plating.
Q. Was there any bolt there?
A. Yes, sir; there was bolts sticking out 2 or 3 inches, and I felt a soft washer, or something. That is all I could feel right up against the armor plate; and going right through the wood and armor.
Q. Was this, apparently, athwartship armor or fore and aft armor?
A. Athwartship armor. I found the ship's side armor since.
Q. You are quite sure of the wood backing and plate backing?
A. Yes, sir.
Q. You went down again on the morning of the 5th, and were told to examine the port side abaft the crane. Do you remember?
A. Yes, sir.
Q. You found the main deck?
A. Yes, sir.
Q. How did it slope?
A. It sloped to starboard, sir.
Q. Was the outside plate bent?

A. Yes, sir; the outside plate was bent inboard, about the length of 5 feet, at a sharp angle with the waterways.

Q. You then crawled aft?

A. Yes, sir; I crawled up the aft turret and found two distinct breaks—that is, the sheathing was bent over to port side, outboard—and I was going to crawl over the first plate when I got the signal to come up.

Q. You crawled aft and felt over the edge, did you not?

A. Yes, sir; I did.

Q. You could not find any side plating attached to the waterways in places?

A. Yes, sir.

Q. You went as far aft as the after turret?

A. Yes, sir.

Q. How many feet forward of the turret is broken right out—the plates?

A. Six or 7 feet forward of the turret.

Q. What side was this on?

A. Port side, sir. It looked as if it had been blown outboard.

Q. You then crawled along on the top of the armor forward?

A. Yes, sir; the last time I was down there.

Q. How far does that clear?

A. As far forward as the crane.

Q. What happened there?

A. The armor appeared to be broken off, and 2 feet abaft it was all clear. The inside armor backing was hanging on at an angle from port up, and over to starboard at the top of the armor belt. The backing was broken off from the armor as far down as I could reach, and sloped inboard.

Q. Explain what you mean by the armor being broken off.

A. By broken off I mean that it looked as if another piece had been blown right away from it. It was gone.

By the COURT:

Q. In your answers you have spoken of plates attached to the waterways being blown in; also some being blown out. What do you mean?

A. I mean that aft it was blown out and forward it was blown in.

Q. How far apart were these places?

A. Ten or 12 feet, sir. It might have been a little less—8 or 9 feet. It is hard to judge under water how far one goes.

The judge-advocate requested that the testimony given by the witness be not read to him by the stenographer, but that he be directed to report to-morrow morning at 10 o'clock, when he will be furnished with so much of the record as contains his testimony and asked to withdraw for the consideration of the same, upon the completion of which he will be again called before the court and given an opportunity to amend his testimony as recorded or pronounce it correct. The request was granted, and the witness instructed accordingly; whereupon he withdrew, after being cautioned by the president not to discuss matters pertaining to the inquiry.

The court then (at 12.45 p. m.) took a recess until 2 o'clock.

The court reassembled at the expiration of the recess.

Present: All the members of the court, the judge-advocate, the stenographer, Captain Sigsbee, and Mr. Wainwright.

Chief Gunner's Mate OLSEN, U. S. Navy, a former witness, was re called, and cautioned by the president of the court that he was stil under oath which he had taken.

Examined by the JUDGE-ADVOCATE:

Q. Have you done any diving on the wreck of the *Maine* since you last testimony before this court?

A. Yes, sir; I have.

Q. To whom did you report the results of your diving?

A. To Mr. Powelson, of the *Fern*.

Q. When you made these reports to him were they as true as if give under oath?

A. Yes, sir.

Q. You went down on the morning of March 1—Tuesday?

A. Yes, sir; I did.

Q. Do you remember where you went down? Was it not at the after V-shaped plate?

A. Yes; I went down at the after V-shaped plate.

Q. Where did you find the first longitudinal?

A. The first longitudinal I found about 20 feet under water, and about 4 feet abaft of the second longitudinal.

Q. Taking frame 17 as the highest frame on this V, where do you think you found the first longitudinal?

A. About frame 23.

Q. For how many frame spaces did you see?

A. About two frame spaces.

Q. What was the condition of the outer skin of the ship between the first and second longitudinals?

A. Between the first and second longitudinal on the outer skin of the ship?

Q. Yes; was it broken?

A. The skin of the ship was cracked off.

Q. Did you follow the second longitudinal down?

A. Yes, sir; I did.

Q. What did you find at the end?

A. I followed it down to about nine frame spaces. I found a plate on which this longitudinal was attached bent underneath the keel on the afterpart of the V.

Q. What is the condition of the longitudinal at the end?

A. Broken off and ragged.

Q. When you went to plate B, what was the color of plate B; plate plate B being the forward one inside the V?

A. Green inside the V—McInniss's paint.

Q. Did you follow the green plate along to the flat keel?

A. Yes, sir; I did.

Q. How does the keel go from there?

A. I followed the green paint along the ship's bottom until I found the flat part of the keel. It extended down and over to port, up and over to starboard, at an angle, I should judge, of about 60 degrees from the bottom of the mud itself.

Q. Which makes the angle of 60 degrees, the one going forward or the one going aft?

A. The angle between the keel and the mud is about 60 degrees.

Q. Did you find the forward part of the ship and the keel sloping downward?

A. Yes, sir.

Q. About how many degrees?

A. It seemed to me that this part of the ship is lying on the starboard side—the starboard side on the mud, the port side up, and the keel to port.

Q. Does not her ram seem lower than her after part?

A. Yes, sir; it does.

Q. What inclination does her keel seem to be to horizontal?

A. Sixty degrees from the bottom.

Q. Abaft both of these V-shaped plates, how does the keel lay?

A. A little farther to starboard and amidships I found the continuation of the keel and broken part. The inside angle irons standing up and the inside and outside keel plates broken off for the space of about 3 feet from the bottom angle irons and vertical keel, and sloping down.

Q. What direction does the keel take then, aft?

A. Almost vertical, going down.

Q. About how long a space do you think it goes vertical?

A. About 20 feet, I should judge.

Q. Then what does it do?

A. It runs aft parallel to the bottom.

Q. What kind of a break is on the bottom; that is, that part that stands vertical and the part that stands horizontal?

A. A regular bending. It bends forward and then it bends aft.

Q. About how far forward does it bend?

A. About 2 feet.

Q. Referring to this part of the keel which stands vertical, how much plate is attached to that part of the keel which stands vertical?

A. The bottom plate of that part of the keel extends 4 or 5 feet on each side of the keel. Some places along these I slipped.

Q. You went down again on the forenoon of March 3, which was Thursday, did you not?

A. Yes, sir; I did.

Q. Did you have orders to find the top part of the keel?

A. Which top part of the keel do you mean?

Q. The inside of the keel.

A. I was told to locate the keel outside, if I possibly could.

Q. How far did you get down this time?

A. I went down over the break and followed the vertical part down to where it bends aft again. Afterwards I located some manholes with high combings around it. I located two right at the break where the keel goes aft on the vertical part, and two farther aft.

Q. Did you find a lightening hole the first frame forward of the break?

A. Yes, sir.

Q. Did you measure this hole?

A. Yes, sir.

Q. Do you remember the measure in both cases?

A. Twelve by 21 inches.

Q. Did you find a manhole in the inner skin just forward of the break?

A. Yes, sir.

Q. Did you measure that?

A. Yes, sir.

Q. Do you remember the measurements?

A. Fifteen by 22 inches.

Q. You found a four-way pipe?

A. Yes, sir.

Q. Where?

A. Alongside the vertical keel forward of the break. The smaller part of the pipe going through the inner skin of the double bottom. This pipe was 3 inches in diameter, inside diameter of the pipe, and then there was a curved pipe going through the vertical keel. This was a 4-inch pipe.

Q. Did you take measurements of the vertical keel at this time?

A. Yes, sir.

Q. How large?

A. Thirty-six inches between the inner and outer skin of the double bottom.

Q. You found several other manholes, did you not?

A. Yes, sir.

Q. They all had high combings?

A. Yes, sir.

Q. How high would you say these combings were?

A. About 3 inches.

Q. Now, along the flat part of the keel, which is abaft the vertical part, did you find the inner bottom corrugated?

A. Yes, sir; I did.

Q. In what way? Describe the appearance of the keel.

A. It was corrugated right over the keel. I am sure it was the inner bottom. The corrugations ran fore and aft. The inside skin of these plates of the keel were bent downward. The vertical keel stands up and the inside skin alongside of it slopes downward on both sides of the keel.

Q. In accounting for the depression of the bottom on both sides of the keel, did you think that the bottom had been knocked down or the keel been shoved up?

A. It may have been from the keel being shoved up, or the inner plate being shoved down; I could not tell which.

By the COURT:

Q. Was there any keel in the bottom at this place?

A. No, sir. That part of the bottom seemed all right. I could not go further on account of the wreckage.

By the JUDGE-ADVOCATE:

Q. At that place, how much bottom was there on each side of the keel, as far as you could tell?

A. I could feel about 6 feet on each side. It might have gone farther, but I could not tell.

Q. Do you know what frame you were at?

A. I must have gone abaft of frame 24.

Q. Did you find some 6-pounder ammunition?

A. Yes, sir.

Q. On which side of the keel?

A. On the starboard side of the keel.

Q. Did you find any 6-inch shell there?

A. Yes, sir; I did.

Q. On which side of the keel?

A. On the starboard side of the keel?

Q. Did you send the shell up?

A. Yes, sir.

Q. On the next forenoon you went down again. From the break in the vertical keel, which way did you go?

A. I went down the vertical keel; followed the flat part of the keel *aft and worked* my way over to starboard.

Q. What did you find then?

A. I worked my way over to starboard, and continuing in that direction I found a light box.

Q. Before you found this light box did you not get among a lot of 6-inch shell?

A. Yes, sir.

Q. How far were these shell from the keel?

A. It must have been about 10 or 12 feet on the starboard side.

Q. Are you sure they were 6-inch shell?

A. Yes, sir.

Q. Did you find a powder tank the same place?

A. Yes, sir.

Q. Describe the tank; 6-inch or 10-inch?

A. I can not recollect.

Q. Did you send it up?

A. I sent one 6-inch drill tank up.

Q. Did you then work your way over to starboard?

A. Yes, sir.

Q. What did you find?

A. A light box.

Q. Where was that light box made fast?

A. It was made fast in the proper light box in which the lamps go. I lifted up the cover of the light box proper.

Q. Was this light box in the bulkhead?

A. Yes, sir; between the coal bunker and what I think was formerly the 10-inch magazine.

Q. How do you know?

A. The 10-inch magazine light only shows one light in the drawings, which shows that this is the only place where there was only one light.

Q. What was the general direction of the bulkhead that you found this light box in?

A. It was flat and lying down.

Q. Which way was it bent down?

A. It was lying flat parallel with the bottom.

Q. Had it been bent to starboard or to port?

A. Over to starboard.

Q. Did you feel the end of this bulkhead?

A. Yes, sir.

Q. What did you find?

A. I followed the continuation of this bulkhead down about 10 feet, and underneath it I crawled into the double bottom.

Q. Did you find the rungs of an iron ladder there?

A. Yes, sir; underneath the deadlight in the bulkhead.

Q. You then went into the 10-inch magazine as you suppose?

A. Yes.

Q. Did you find 10-inch tanks there?

A. I found some 6-inch shells in the space; some of them had slings on them and wooden nose pieces; they were in good condition. Digging underneath these shells I located some tanks.

Q. What kind of tanks?

A. I should judge them to be 10-inch tanks.

Q. Were they in good condition?

A. I could not tell. I could only feel them on account of the shell being on top of them, but they showed that they were tanks by their shape.

Q. Did you find in your *dive any cutlass* or scabbard?

A. Yes, *sir; I found a scabbard.*

Q. Where?

A. I found one on this plate, going from the light box down about 1 feet and in the double bottom, a scabbard and gas check disks in pad which I sent up.

Q. Did you find any paymaster's stores on top of the tanks you wei just speaking about?

A. Yes, sir; I found canned goods, some low-cut paymaster's shoe

Q. Did you find a piece of wooden grating from the floor of the ma azine?

A. Yes, sir; I did. I sent it up.

Q. Had it been burned?

A. I could not tell. Mr. Powelson looked at it after it came up.

Q. You went down again Saturday?

A. Yes, sir.

Q. Where did you go?

A. I went aft, trying to locate the armor plate.

Q. Did you find anything that looked to you like a boiler?

A. Yes, sir; it looked to me like a boiler, but I did not stay dow there long enough to get a good look at it. It was very dark.

Q. Was it very much out of shape?

A. Yes, sir.

Q. You then walked over to starboard, I believe, after walking aft and found a plate.

A. Yes, sir.

Q. Will you please describe this plate that you found?

A. I found a plate with angle iron—V-iron. These irons were abou 12 inches apart, forming a regular square in two rows.

Q. What direction was this plate standing in?

A. Up and over to starboard, standing at an angle up and leanin to starboard.

Q. Did you find any cellulose?

A. Yes, sir; I found the cellulose compartment.

Q. Where were you then?

A. I must have been at the midship line of the ship on the por side aft.

Q. What do you mean by midship line of the ship? About the plac of the crane?

A. Yes, sir; about somewhere in that line.

Q. Are you sure this was cellulose?

A. Yes, sir. I took it out in my hand and looked at it. It wa packed in the compartment.

Q. What was the size of the compartment and the shape of the com partment that the cellulose was in?

A. I could feel the outside and inside skin of this compartment. I must have been 3 or 4 feet wide from the inside to the outsid It might have been larger or smaller—4 feet I judge it to b It was standing up and pointed, one pointing aft about the por quarter and the other pointing forward to the starboard bow. It wa way abaft. I know exactly where 24 frame is; it is 20 or 30 feet aba frame 24.

By the COURT:

Q. Do you know where the forward end of the belt is—the armo belt?

A. Yes, sir.

Q. What frame is that?

A. About frame 30.

By the JUDGE-ADVOCATE:

Q. Did you after this lift up a couple of plates and throw them aside?

A. Yes, sir.

Q. Where were they?

A. They were below this portion described—below and forward of the cellulose compartment. I picked up a 6-inch powder tank. This tank was full of powder, the bottom and head of the tank being on the tank.

Q. Did you send this tank up?

A. Yes, sir.

Q. Did you find a lot of other broken tanks about here?

A. Yes, sir; a lot of them split in the seam. On the head of this tank I sent up there was a lot of black mud. We dried it and found it was powder. Where all the broken tanks were I could pick up a lot of this mud. I found that mud in several places around that place, and I think it is all powder. I can tell the difference between these and the mud which is outside the bottom of the ship. This is very black, and the mud on the outside turns a greenish color when you stir it up.

Q. What made you think it was powder, only the color of it?

A. I tried to burn some, and it burned all right.

Q. Who made this experiment?

A. Chief gunner's mate of the *New York*, Fisher.

Q. You were there?

A. Yes, sir.

Q. And you say there is plenty of this black mud around the ship?

A. Yes, sir; especially where the broken tanks are you will find some of that mud all around. It seemed to me that the tanks in this place had been spilled all around.

Q. What did you do this morning in the way of diving?

A. I went down, took a lead line down plumb in line with the ship. I came up again; I made a line fast at the broken part of the keel, and then I went down again, and was towed outside, clear of the ship, and was told to go down and see if I could find any coal. I went aft until I came to the break where the armor ends, and could not find any sign of coal on the port side.

Q. How far away from the ship did you walk when you were looking for coal?

A. I must have walked about 20 feet out—and I walked in a zigzag out and in, 20 feet clear—and back again to where the armor ends.

Q. How far forward did you commence the search?

A. I started forward, about at the ram, a little further out, and as far forward as the ram.

Q. When you put your lead down had you found the ram itself?

A. The end of the ram; that is, the bow of the ship itself, was down in the mud. I should judge the place was about 6 feet from the bow, that part of the keel and the ram being about 6 feet apart, and the flat part of the keel sloping forward at this point. The ram itself I should judge to be about 6 feet.

Q. Did you find the ram plates?

A. Yes, sir.

Q. And you were well forward of the afterend of the ram plates?

A. Yes, sir. I could not feel the afterpart of the ram plate. It extends underneath the side.

Q. What is the condition of the ship's side under the after one of the two V-shaped plates?

A. Going down about half-way down, on the after end of B, and then getting onto the ship's bottom properly, I found two dents extending between two frames *and bulged into the ship's* bottom itself.

Q. Are these two dents in a horizontal line?
A. They are in a parallel line to the keel.
Q. How deep should you say they were?
A. About 3 or 4 inches deep.
Q. And about what is their diameter?
A. About 4 feet in diameter.
Q. Is there a frame between the two dents?
A. It looks so from the outside.

The judge-advocate requested that the testimony given by the witness be not read to him by the stenographer, but that he be directed to report to-morrow morning at 10 o'clock, when he will be furnished with so much of the record as contains his testimony, and asked to withdraw for the consideration of the same, upon the completion of which he will be again called before the court and be given an opportunity to amend his testimony as recorded or pronounce it correct. The request was granted, and the witness was instructed accordingly; whereupon he withdrew, after being cautioned by the president not to discuss matters pertaining to the inquiry.

Naval Cadet CLUVERIUS, U. S. Navy, a former witness, was recalled and warned by the president that he was still under the oath that he had taken.

Examined by the JUDGE-ADVOCATE:

Q. Were you the mate of the berth deck of the *Maine* at the time of her destruction?
A. I was.
Q. What were your duties as regards the securing of the ship for the night?
A. The duties I had in securing the ship for the night were to instruct the persons in charge of such departments as by the ship regulations were to be closed at sunset that these departments were to be closed, and that the tag keys placed upon the keyboard, which was at the forward part of the engine room hatch in compartment C100, were placed there.
Q. What part of this duty did you do that night?
A. I was on watch from 4 until 8, and did not personally instruct the men in charge of these compartments, but had warned them the night before, and I remember that they had all been turned in the night before, and on the night of February 15 I am almost positive that these men reported to me that their compartments were closed while I was officer of the deck.
Q. Did you look at the keyboard that night?
A. Yes, sir; when I was relieved for my dinner, in passing the keyboard I glanced at it and remember seeing the numbers solid.
Q. Were the regular 8 p. m. reports made to you that night?
A. They were, sir.
Q. Did you consider Seaman Neilson, temporarily in charge of the hold, a reliable man?
A. I did, sir.
Q. Had the magazines or shell rooms or any of them been open during your tour of duty, the dog watches that day?
A. To my knowledge they had not, sir.
Q. Had any of them been reported to you as open when you took the deck?
A. They had not.

ere being no further questions to ask this witness, his testimony read over to him by the stenographer, and by him pronounced cor- ; whereupon he withdrew, after being cautioned by the president to discuss matters pertaining to the inquiry.

ie court then (at 3.30 p. m.) adjourned until to-morrow Tuesday, ch 8, 1898. at 10 o'clock a. m.

TWELFTH DAY.

U. S. L. H. TENDER MANGROVE,
Harbor of Havana, 10 a. m., Tuesday, March 8, 1898.

he court met pursuant to the adjournment of yesterday.
resent: All the members of the court, the judge-advocate, and the iographer.
he proceedings of yesterday were then read over and approved.

unner's Mate T. SMITH, U. S. Navy, a former witness, was then alled, and cautioned by the president of the court that he was still ler the oath he had taken.

Examined by the JUDGE-ADVOCATE:

Q. Have you done any diving at the wreck of the *Maine* since your t testimony was given before this court?
A. Yes, sir.
Q. To whom did you report the results of your searches?
A. Ensign Powelson.
Q. When you made these reports were they as truthful as if you had en under oath?
A. Yes, sir.
Q. Do you remember going down on Monday morning, February 28?
A. Yes, sir.
Q. Where did you go down?
A. I went down along the after wing which forms the V.
Q. Did you find the first longitudinal?
A. The first longitudinal; yes, sir.
Q. Did you find the bottom plate?
A. Yes, sir; I did.
Q. What was its condition?
A. Condition, it was good.
Q. Did you find any bottom plate broken with the edges pushed in?
A. Yes, sir.
Q. Where?
A. The lower edges of the wing, and all around the edges of it was roken and jagged.
Q. Was it pushed in from the green paint?
A. It comes closer to the forward part of where it forms the V as ou go down deep, and it has a sort of corrugated shape to it.
Q. You went down again on the afternoon of the same day, did you ot?
A. Yes, sir.
Q. You were sent down, I believe, to look for a circular hole. Do you emember?
A. Yes, sir; that is what I was sent down for.

Q. Where did you locate it?

A. Between the sixth and seventh frame, and from the water's edge down.

Q. What was the nature of the hole?

A. It was a circular hole, sir, like one that had been there. There was just half of it there with the rivet holes.

By the COURT:

Q. The rivet holes were in a straight line?

A. No, sir; in a circular line.

By the JUDGE-ADVOCATE:

Q. Did you find a number of 6-pound shell there?

A. Yes, sir.

Q. Were there cartridges on them?

A. Just the shell, sir.

Q. On the morning of March 2, which is Wednesday morning, you went down again, I believe?

A. Yes, sir.

Q. What was your purpose in going down that time; do you remember?

A. I remember it was to find where the break of the vertical keel was.

Q. Did you take anything with you for measurements?

A. A 7-foot rule, sir.

Q. What was the thickness of the vertical keel as you found it?

A. About 5½ inches, sir, on the flange.

Q. You found a four-way pipe, did you not?

A. Yes, sir.

Q. Did you measure the distance from the vertical-keel break to the next frame forward?

A. Yes, sir.

Q. Do you remember what this measurement was?

A. Thirty-six inches, sir.

Q. What was the width of the inner keel plate?

A. The inner keel plate was 37 inches.

Q. You went down again in the afternoon of the same day, did you not?

A. Yes, sir.

Q. You looked then for the keel and found the vertical part, did you not?

A. Yes, sir. The horizontal part abaft the part which is now vertical.

Q. Abaft the vertical part?

A. Yes, sir.

Q. What did you find?

A. I found the vertical keel lying in a horizontal position.

Q. Did you find a 10-inch shell there?

A. Yes, sir.

Q. What else?

A. A powder tank.

Q. What else?

A. A bunch of knapsacks. I sent them up from below.

Q. Did you find a swab?

A. Yes, sir; I found a big magazine swab.

Q. Was it burnt?

A. No, sir; it was not.

Q. What kind of a bend has the keel where it goes to the horizontal again?

A. It forms a sort of a V in there with the two angle irons that are bolted to the vertical keel, and also bolted to the skin of the double bottom, which is broken right in the corner where it forms the V.

Q. Do I understand that the keel first bends forward and then goes aft?

A. It first goes forward and then goes aft.

Q. What is the distance, do you think, that it goes forward?

A. Thirty-six inches, sir.

Q. You then went down the keel into the mud?

A. Yes, sir; I went off to the bottom of the plate.

Q. What did you find there in the mud where the flat keel goes into the mud?

A. I do not remember what I found there.

Q. Do you remember finding a hole in the mud?

A. Yes, but in a different place, sir. It is by the bow where I found the hole.

Q. Now tell us exactly where you found that hole.

A. I followed the forward part of the wing that forms the V down until I came to the mud. I took a couple of steps aft and felt the vertical keel again, and followed it down until I came to the mud; then I was standing up straight until I could take my two hands so [witness illustrated by extending his arms horizontally], out that way, and feel the mud all around.

Q. How deep was this hole, do you think?

A. I should judge 7 feet.

Q. How wide was it—the diameter, I mean?

A. About the same, sir.

Q. Was the bottom of the hole hard at this place?

A. The mud was a little harder than the other mud. You would not sink over 18 inches in that mud.

Q. Can you locate this hole?

A. Yes, sir.

Q. By the frames, where was it? Locate it with the two V-shaped plates. Was it forward of the after V-shaped plate?

A. The hole was about under the forward V-shaped plate. The largest part of the hole is on the port side of the ship. The keel can not be felt from the hole, and it seemed to be under the forward part of the forward V-shaped plate.

Q. What did you find in this hole?

A. I found a tin I should judge to be about 20 inches long and 10 inches square. It looked like a can made up in a square, and 20 inches long. There was a place where a big square hole had been with a gasket. I sent it up to Mr. Powelson.

Q. Were you down yesterday afternoon?

A. Yes, sir.

Q. Tell to the court what you found.

A. I was landed on top of the boiler—the forward boiler on the port side. What I found of it seemed to be in good condition. Between that boiler and the forward athwartship bulkhead I found two 10-inch shells and a 6-inch powder tank, and also a large copper pipe, about 4 inches in diameter. That is all I have to say about that for the present.

Q. Where was this bulkhead, in regard to the boiler?

A. It seemed to me to be between that boiler and some other boiler.

Q. Was it forward of the boiler or abaft the boiler?

A. It was abaft the boiler.

Q. Did you send the 10-inch tank *up*?

A. No, sir; I did not.
Q. What was its condition?
A. It was split in the seam, the same as the rest.
Q. Nothing in it?
A. Excelsior.
Q. You have no other report to make of yesterday's diving, h you?
A. No, sir; I was hauled up at that time.
Q. What is fast to the keel which now stands up and down?
A. The vertical keel. On the starboard side there is the inner s of the double bottom made fast to it, and on the port side part of way it is torn off.
Q. Torn off altogether?
A. In some places on the port side it is torn off altogether.
Q. What appearance does it make next to the keel; which way c it bulge?
A. From the present position of the keel it bulges aft.
Q. Were the keel horizontal would it bulge up?
A. Yes, sir.

By the COURT:

Q. All this is the inner bottom?
A. Yes, sir.
Q. In that part of the keel in the inner bend where the inner bot is torn from the keel, can you tell us anything of the condition of outer bottom?
A. No, sir; I can not. I would have to walk around there and that out to see what condition it is in.

There being no further questions to ask this witness he was dire to hold himself in readiness to appear before the court whenever he further testimony to give; whereupon, after being cautioned by president not to discuss matters pertaining to the inquiry, he withdı

The court was then cleared (at 11.40 a. m.) for further discussion

The doors being opened, the court at 12.30 took a recess until 2 p

The court reassembled at the expiration of the recess.

Present: All the members of the court, the judge-advocate, and stenographer.

Naval Constructor J. B. HOOVER appeared as a witness before court and was duly sworn by the president.

Examined by the JUDGE-ADVOCATE:

Q. Please state your name, rank, and station.
A. John B. Hoover, naval constructor, United States Navy.
Q. Were you ordered by the Secretary of the Navy to assist court of inquiry in their work?
A. I was.
Q. Have you visited the wreck of the *Maine*, and examined s portions as are above water?
A. I have.
Q. Do you recollect the three portions of wreck which are in a f and-aft line some distance forward of the middle superstructure?
A. Yes, sir.
Q. Can you identify the after one of these three of this wreckage
A. I can. It is a portion of the ship from frame 17 showing a tion of the second longitudinal, and main frame 17, and the out

platings doubled—thrown up and doubled to starboard. Bottom platings thrown up and doubled back.

Q. What is the direction of frame 17 with regard to the fore-and-aft line of the ship at she now lies?

A. Frame 17? In relation to the fore-and-aft line of the ship? Well, it is canted. The port frame is come up and gone over to starboard.

Q. How far from the center line of the ship does the doubling in the plate occur?

A. I can not say.

Q. The frame 17 which appears above water, you say, how near was that to the vertical keel when in its normal state?

A. About 5 feet from the middle line of the ship.

Q. Did you measure the distance of frame 17 from some part of the ship which is in its normal position?

A. Yes. I measured the distance from the after funnel, which is at frame 43, and which is about 93 feet 6 inches; that is, to the after object seen.

Q. What would have been that distance had the ship been in its original shape from frame 43 to frame 17?

A. It would be 103 feet and one-half.

Q. Did you examine the next object forward of this one? What is that?

A. That is a portion of the protective deck abreast of the chain locker.

Q. Which side of the protective deck?

A. The port side.

Q. Did you measure that from the same normal part of the ship?

A. I did.

Q. What was the distance?

A. 109 feet 6 inches.

Q. What would that distance have been with the ship in its normal condition?

A. That was opposite the chain lockers. It ought to be just the same, 103 feet 6 inches.

Q. Did you examine the the third piece of wreckage forward of the second?

A. I did.

Q. What did you identify that to be?

A. As a portion of the berth deck, but broken off at frame 19 with the part of the cellulose compartment bulkhead attached to it, and showing one scupper hole, going up from frame 19 and taking in frames 18 and 17.

Q. Which side of the berth deck was this?

A. That was on the port side, and it was twisted right around to starboard looking forward.

Q. What was the distance from the same normal point in the ship?

A. That would be 130 feet.

Q. Then, according to your statement, the lower portion of the ship near the keel, at frame 17, was thrown up and abaft the same portion of the ship at a higher deck.

A. Thrown up and abaft the same portion of the ship at the berth deck and at the protective deck.

Q. The part of the protective deck was thrown up between the lower portion and the berth deck portion, was it not?

A. Yes.

Q. Did you examine the line *of keel which* these three pieces of

wreckage show you and compare it with the line of keel in the after part of the ship?

A. I did in this way only—by sighting through as near as I could see.

Q. Did you find that this line of keel in the wreck is in line with the after keel line of the ship?

A. They are on the port side of the original keel.

Q. How much?

A. In the neighborhood of 4 to 5 feet, but they are canted to starboard.

Q. Were you able to see anything below water at these three pieces of wreckage?

A. Nothing that I could recognize.

By the COURT:

Q. According to your statement, these three pieces of wreckage—the bottom of the ship, the protective deck, and the berth deck—all three of which show above the water at present, and all coming from points which were nearly in the same vertical plane: Now, then, the piece of the berth deck, forward portion of the three, which is now forward of the other two.

A. The protective deck comes next and the bottom comes last. Then the bottom of the ship, as it now stands, has been turned nearly 90 degrees—revolved nearly 90 degrees.

Q. The protective deck has been revolved how much?

A. About the same.

Q. And the berth deck?

A. The berth deck, I think, a little more than the others. It seems to be twisted more.

Q. With these three decks, one above the other, the upper one has gone forward and been turned through an angle of 90 degrees?

A. Yes.

Q. Did all these pieces that show above water belong to the port side on the port side of the keel?

A. Yes, sir.

Q. Except the protective deck? Is that on the port side?

A. The protective deck is on the port side also, but not all of it.

Q. Yes, but what there is on it came from the port side?

A. I did not mean that, exactly.

Q. What position does the forward 6-inch magazine occupy with reference to this portion of the bottom of the ship, the protective deck, and the berth deck which have been displaced as described?

A. The forward part of the 6-inch magazine is just below the three pieces of deck as they originally were. The forward 6-inch magazine begins at frame 18. The wreckage goes from 17 to 19. 18 is a water-tight bulkhead. The magazine goes from 18 to 21. There are two magazines there. In 18 to 21 is the forward magazine.

There being no further questions to ask this witness, he was directed to appear to-morrow, to read his testimony, at 10 a. m.; and after being warned by the president of the court not to converse regarding the inquiry he withdrew.

Carpenter HELM, U. S. Navy, a former witness, was recalled and warned by the president of the court that he was still under oath which he had taken.

Examined by the JUDGE-ADVOCATE:

Q. Since you have given your last testimony before this court have

you made an examination of that portion of the wreck of the *Maine* which is above the water?

A. Yes, sir.

Q. Do you remember the three portions of wreckage which appeared in a normal fore-and-aft line some distance forward of the middle superstructure?

A. Yes, sir.

Q. Can you identify the after one of these three pieces of wreckage?

A. Yes, sir; that is a piece of outside plating with second longitudinal, frame 17 and frame 18.

Q. How near the keel is that portion of frame 17 which you see above the water?

A. About 10 feet.

Q. Can you identify the second piece of wreckage—the one forward of this?

A. Yes, sir; that is the protective deck, in wake of the sheet-chain locker, on the port side. The highest point is frame 18, being below frame 17, and frame 16 just under the water.

Q. Are these three frames 18, 17, and 16 in a vertical line?

A. Well, they are at about an angle of nearly about 60 degrees.

Q. Is the upper frame forward or aft?

A. The upper frame is forward.

Q. What do you mean by the upper frame?

A. Eighteen is the highest one.

Q. What is the third and forward piece of wreckage?

A. That is part of the first deck bulkhead which helped to form the cellulose compartment. The highest point is frame 19, 18 next, and 17 is under the water. The pipe hole through that deck belongs to one of the forward scuppers.

Q. What is the general direction of these three frames 19, 18, and 17?

A. I guess they would be pretty near at an angle of 80 degrees from the horizontal.

Q. The top one forward or aft?

A. No. 19 forward.

Q. Which side of the berth deck and what portion of it do you identify this as being?

A. Port side, frame 19.

Q. And the cellulose bulkhead is also from the port side?

A. Yes, sir.

Q. Do these three pieces of wreckage seem to you to be twisted around?

A. From aft to forward they are twisted about 90 degrees and turned completely around.

By the COURT:

Q. What was originally the relative positions of these three pieces of wreckage?

A. Well, they were all parts of decks running fore and aft. They were practically in a vertical position over one another. 19, 18, and 17 are within the vicinity of 16, 17, 18, and 19 frames.

Q. How do you think they got into their present condition?

A. That is beyond me, Captain.

Q. Are they all in the same position with reference to the horizontal that they were originally?

A. No, they are thrown forward of one another. They are right forward of one another. The inner bottom *seems to* come right up and over. The berth deck *extends nearly vertical* now, with the upper side

of the deck to port. The protective deck stands about 60 degrees to port and slants about 60 degrees to vertical. The upper side faces forward. The top of the protective deck faces also to port and slightly forward.

Q. Taking the superstructure of the ship between frames 18 and 24, which do you regard as affording the greater resistance, the pressure from the interior or the exterior?

A. I think the double bottom.

By the JUDGE-ADVOCATE:

Q. Where were the knapsacks and infantry equipments stowed in the *Maine?*

A. I think they were stowed in the compartment A11.

There being no further questions to ask this witness he was directed to appear to-morrow at 10 a. m. to read over his testimony; whereupon, after being warned by the president of the court not to discuss matters pertaining to the inquiry, he withdrew.

Consul-General FITZHUGH LEE appeared as a witness before the court, and was duly sworn by the president.

Examined by the JUDGE-ADVOCATE:

Q. Please state your full name and your official position.

A. Fitzhugh Lee, United States consul-general at Havana.

Q. When were you first notified of the intended arrival of the battle ship *Maine?*

A. Twenty-fourth of January, 1898. I have the telegram here and will read it:

It is the purpose of this Government to resume the friendly naval visits at Cuban ports. In that view the *Maine* will call at the port of Havana in a day or two. Please arrange for the friendly interchange of calls with the authorities.

DAY.

Q. How long after the receipt of this telegram did the *Maine* arrive?

A. She arrived the next morning, at about 11 o'clock, I think.

Q. Had you notified the authorities at Havana of her intended arrival?

A. After receiving that telegram I went down to the palace and notified the authorities, and read the telegram to them. That was on the afternoon of the 24th of January. Immediately after having received the telegram above referred to I sent the following reply to the State Department:

HAVANA, *January 24.*

Advise visit be postponed six or seven days to give last excitement more time to disappear. Will see authorities and let you know. Governor-General away for two weeks. I should know day and hour visit.

LEE.

The following morning I sent the following telegram to the State Department:

[In cipher.]

HAVANA, *January 25.*

At an interview authorities profess to think United States has ulterior purpose in sending ship. Say it will obstruct autonomy, produce excitement, and most probably a demonstration. Ask that it is not done until they can get instructions from Madrid, and say that if for friendly purposes, as claimed, delay unimportant.

LEE.

And after arrival of the *Maine* I sent the following telegram to the Department:

HAVANA, *January 25.*

Ship quietly arrived, 11 a. m. to-day; no demonstration so far.

LEE.

After sending the telegram of the 24th I received the following reply on the 25th:

Maine has been ordered. Will probably arrive at Havana some time to-morrow, Tuesday. Can not tell hour. Possibly early. Cooperate with the authorities for her friendly visit. Keep us advised by frequent telegrams.

DAY.

There being no further questions to ask the witness, his testimony was read over to him by the stenographer and by him pronounced correct; whereupon he withdrew, after being cautioned by the president not to discuss matters pertaining to the inquiry.

The court then (at 5 p. m.) adjourned to meet to-morrow, Wednesday, March 9, at 10 o'clock a. m.

THIRTEENTH DAY.

U. S. L. H. TENDER MANGROVE,
Harbor of Havana, Wednesday, March 9, 1898—10 a. m.

The court met, pursuant to adjournment of yesterday, the twelfth day of the inquiry.

Present: All the members of the court, the judge-advocate, and the stenographer.

The record of the proceedings of yesterday was read and approved.

Naval Constructor HOOVER appeared before the court.

By the JUDGE-ADVOCATE:

Q. Have you read over the testimony which you gave yesterday before this court?

A. I have.

Q. Is it correct as recorded?

A. It is.

The witness then withdrew, after being cautioned by the president not to discuss matters pertaining to the inquiry.

Carpenter HELM appeared before the court.

By the JUDGE-ADVOCATE:

Q. Have you read over the testimony which you gave before the court yesterday?

A. Yes, sir.

Q. Is it correct as recorded?

A. Yes, sir; it is.

The witness then withdrew, after being cautioned by the president not to discuss matters pertaining to the inquiry.

Ensign W. V. N. POWELSON, U. S. Navy, a former witness, was recalled, and, having been warned by the president that he was still under the oath he had previously taken, testified as follows:

Examined by the JUDGE-ADVOCATE:

Q. Have you read over the testimony which you gave before this court last Monday?

A. Yes, sir.

Q. Is it correct as recorded?

A. With one exception. On page 492, third line from the bottom, next to the last word, change "of" to "with."

Q. Is your testimony as amended now correct?

A. Yes, sir.

Q. Since giving that testimony have you taken an angle which would show the position of the ram with regard to the keel of the ship?

A. Yes, sir.

Q. Will you please state how you did it, and the result?

A. I sent a diver down to make a lead line fast as near to the point on the ram as possible. He could not find the point of the ram, as it was in the mud, and he made his lead line fast to some weights alongside a ram plate at a distance which he estimated from the curve of the keel at that point and the stem of the ship to be about 5 feet abaft the ram point. I sent a man out in a boat to plumb this point on the ram plate. I also sent a diver down to make a line fast to the vertical keel where this broken place occurs at frame 18. I then got in a boat and plumbed this latter point, and took an angle between the plumb line of the armor plate and the center of the after funnel of the *Maine*, which occupied probably its original position.

This angle I measured to be 104°. Standing in the same position I measured an angle between the funnel to which I have referred and the mainmast of the ship. The angle was 2° 10′. I was at that time to port of the line connecting the funnel and the mainmast. I took a measurement with a tape line from the plumb of the ram and the plumb of the break in the vertical keel, at frame 18. I found this to be 42 feet. I measured the distance from the funnel to the plumb of the ram and found it to be 99 feet. I measured the distance from the funnel to the plumb of the vertical keel at frame 18 and found it to be 86 feet.

Q. Did you yesterday afternoon send Diver Olsen down to examine the break in the ship's side?

A. Yes, sir.

Q. Where did he descend?

A. He went down at about frame 41, that being the most forward point of the armor plate which is now attached to the ship.

Q. On which side of the ship?

A. On the port side.

Q. How much water was there at the plumb line to the ram?

A. I think it was about 35 feet.

By the COURT:

Q. Now, did the measurements which you made with reference to the position of the ram enable you to determine how the keel of the ship attached to the ram laid?

A. I have not made any drawings from these measurements.

Q. That is one thing we would like to know—how the keel lies.

A. I will take measurements of everything and let you know.

There being no further questions to ask this witness, he was directed to hold himself in readiness to give further testimony, and after being cautioned by the president not to converse about matters pertaining to the inquiry he withdrew.

Chief Gunner's Mate A. OLSEN, U. S. Navy, a former witness, was recalled, and, having been warned by the president that he was still under the oath he had previously taken, testified as follows:

Examined by the JUDGE-ADVOCATE:

Q. Have you read over the testimony which you gave before this court last Monday?

A. Yes, sir.

Q. Is it correct as recorded?

A. It is correct except in two places.

On page 523, eleventh line, after the words "with the," insert "ram plate on bow of ship."

On page 521, fifth line, it should be "U iron" instead of "V iron."

Q. Is your testimony, as amended, now correct?

A. Yes, sir.

Q. Olsen, will you state to the court what you mean by the ram plate which you can feel?

A. The ram plate—it is fastened on the bow of the ship. It extends out from the ship about 10 or 12 inches—a heavy plate.

Q. Is it convex on the outside?

A. Yes, sir.

Q. Does this plate you speak of extend fore and aft on the whole of the ship?

A. Fore and aft; yes, sir.

Q. Have you been down diving since you gave your last testimony?

A. Yes, sir; I was down yesterday, Monday evening, and yesterday all day.

Q. Please state what you found.

A. I went down Monday night, after I left the court here, to look for a piece of wire, of which I spoke, but I could not find it. Then I went down again yesterday morning, following the outside of the ship fore and aft, looking for this wire, which I could not find. I gave that up entirely and started to overhaul the bottom of the ship at that point. I found where I went down, at frame 31, at the armor plate, that I could feel the bottom of the ship forward for ten frame spaces. At the end of ten frame spaces and at frame 31, I found her to be cut off entirely. That is as far as I could walk in the mud. Then I went back again, and I counted six frame spaces from the armor plate forward. That is about frame 35, and from there forward I found to be blown up and over to starboard, this point of the bottom being much higher than at any other place along the edge of the bottom abaft this point. Then I tried to locate this point, where she was broken up, and I found a manhole, to which I attached a line, which is fast over there now on the scow. You can plumb that point at any time by the line.

At frame 31 I found the bilge keel, and followed the break in amidships as far as I could. I followed it in to about 4 or 5 feet inside of the bilge keel, and could not go farther on account of wreckage. Then I came up and went down in the afternoon forward to locate the bow. I went down the bow of the ship at the ram plate, and I could not walk any farther forward on account of the wreckage, but I walked out clear of the ship to port and forward *about 10 feet.* Then I walked in again

over to starboard, and I got right down to the bow of the ship and followed the flat surface of the bow right forward until I came to a hawse pipe. I felt all around this to see if I could feel the chain, but I could not; but I dug the mud out underneath and found another hawse pipe with chain.

Q. Which bow was that?

A. The port bow. Then I went farther forward, about 5 or 6 feet, and I could feel the top keel of the ship. I found the shape of the keel bent, the iron keel, around the forecastle. Underneath the keel I found scroll work on the bow of the ship and over this hawse pipe, but I found no chain. I found a cover that covers the hawse pipe, with two hinges and a guy made fast on this plate, down in the mud—I think originally made fast on the bow of the ship—and tried to haul it in, but could not get in the slack, so I cut the mousing that hooks where it was hooked into the plate. Then I followed the chain out from the hawse pipe, out to port from the ship, and found the port anchor in the mud. Then I found another chain leading out, I think, from the starboard bow underneath and out. I think that chain runs to a bow, but I did not locate that spot.

Q. When you first descended where the armor is broken off, what frame is that?

A. Frame 41, sir.

Q. What is the appearance of the edge of the ship's bottom, from frame 41 to frame 35?

A. The edge is ragged, going forward between frames 35 and 41, sir.

Q. Are there any ragged points tending in or out?

A. No, sir.

Q. From frame 35 to frame 31, you say, the ragged edge slopes in toward the keel?

A. Yes, sir; in and up.

Q. Then the appearance of things there at frame 35 would indicate that the ship's keel commences to be lifted?

A. Yes, sir; seemingly on account of the plates here being so much higher, and further aft the rest of the ship being in the mud so far.

Q. Then you are able to get underneath the bottom of the ship forward of frame 35?

A. Yes, sir.

Q. How much plating should you say is left on the keel at frame 35?

A. The bottom of the ship is attached to about the fourth longitudinal.

Q. At frame 31 how much plating is attached to the bottom of the ship from the keel out?

A. To about the fourth longitudinal at this point also.

Q. At frame 31 you say the bottom of the ship seems to have disappeared forward of 31?

A. Forward of 31, yes, sir.

Q. Have you endeavored to find the keel itself forward of 31?

A. Yes, sir; but could not get in amidships as far as the keel ought to be, on account of the wreckage.

Q. Where did you again find the keel forward of 31?

A. The only place forward of 31 where I found the bottom of the keel is at frame 18.

Q. What is the condition of the keel between 18 and 22?

A. From 18 aft the keel goes down vertically—that is, the inner skin of the double bottom, not the keel—goes down vertically for a space of about 20 feet, and then goes aft, sloping lower and lower as far aft as *you go.*

Q. At what frame did you find the bilge keel?

A. At frame 31.

Q. What was the appearance of this bilge keel?

A. It was the wood part of that keel that was ragged and torn.

Q. Could you feel the after break of the keel—the bilge keel?

A. I could feel the break of the bilge keel where she was broken at frame 31; forward of that it was gone.

Q. What was the condition of the bilge keel and the wood on it, as you say; where you did find it?

A. The steel part of the bilge keel was broken off, showing rough edges, and the wooden part, extending forward of it, was ragged and torn in splinters.

Q. At what frame did you find the fourth longitudinal, clear of the bottom plating of the ship?

A. At frame 31.

Q. How far did the longitudinal extend forward clear of the plating?

A. About 2 or 3 feet. I didn't measure it.

Q. What became of it then?

A. It was broken off. It did not extend any farther forward.

Q. In what direction did this few feet of longitudinal run?

A. Seemingly it appeared to be in its normal condition, not bent out of shape.

Q. When you looked for the bow of the ship did you again find it was over on the starboard side?

A. Yes, sir. I could feel over the rail on the bow of the ship and feel the mud. The starboard side must be covered with mud.

Q. She seemed to be lying on the starboard side?

A. Yes, sir.

Q. Which way did the keel go, with the line of the mud—up and out? Did it go aft and parallel to the line of the mud?

A. The keel is up and over to starboard a little aft.

Q. Counting from the stem aft?

A. Where the keel is out of the mud, up over to starboard, a little aft.

Q. Did you take the depth of water over the break of the keel at frame 18?

A. Yes, sir.

Q. How much was it?

A. Six feet of water, sir.

Q. Did you plumb it at the top of the frame, or where?

A. At the point where the keel plates are broken away from the bottom angle irons of the vertical keel.

Q. Did you plumb and take depths of the bend of the keel lower down?

A. Yes, sir.

Q. What depth did you find?

A. It was 25 feet.

Q. Twenty-three feet?

A. I think so.

Q. I would like you to get that exact. What part of the bend did you plumb with your line?

A. I plumbed the point where she starts to go aft—where the vertical keel comes down and goes aft.

Q. Did you plumb the top of the vertical keel?

A. It was the inner skin of the double bottom.

Q. While down diving since you gave your last testimony have you looked for the keel on the port side of the ship?

A. Yes, sir; I have been looking for the coal. I was told Monday to look for the coal, and every time I have been down since I have looked for it, but have not been able to find it.

Q. On the port side of the ship?

A. Yes, sir.

Q. Have you looked as far forward as "B?"

A. Yes, sir.

Q. And as far aft as frame 41?

A. Yes, sir.

Q. Well out from the ship?

A. Yes, sir; as much as 20 feet from the ship.

Q. In toward the ship?

A. Yes, sir; inside, and bottom.

Q. Did you find much wreckage on the port side?

A. No, sir; no wreckage there.

There being no further questions to ask this witness, he was directed to appear to-morrow to read over his testimony, and to hold himself in readiness to give further testimony. Whereupon, having been cautioned by the president not to discuss matters pertaining to the inquiry, he withdrew.

Gunner's Mate T. SMITH appeared before the court.

By the JUDGE-ADVOCATE:

Q. Have you read over your testimony which you gave before this court yesterday?

A. Yes, sir.

Q. Is it correct as it is recorded?

A. Yes, sir; with the exception of one mistake. On the seventh line of page ——, change "five and one-half to "five-eighths," so as to read "five-eighths of an inch."

Q. Is your testimony as now recorded correct?

A. Yes, sir.

Q. Have you been down since you gave your last testimony?

A. No, sir; I have not.

The witness then withdrew, after being cautioned by the president not to discuss matters pertaining to the inquiry.

The court then, at 11.45, took a recess until 2 p. m.

The court reassembled at the expiration of the recess.

Present: All the members, the judge-advocate, and the stenographer.

Gunner's Mate SCHLUTER, a former witness, was then recalled, and, after being warned by the president of the court that he was still under the oath he had taken, testified as follows:

Examined by JUDGE-ADVOCATE:

Q. Have you read over the record of your testimony which you gave before this court last Monday?

A. Yes, sir.

Q. Is it correct as recorded?

A. It is, sir, with the exception of two lines. On page 507, eighth line, the word "plates" should read "breaks." On page 509, second line, the word "plate" should read "break."

Q. As amended, is it now a correct record?

A. Yes, sir.

Q. Have you been down diving since you gave your last testimony?

A. Yes, sir. I was down yesterday.

Q. Please tell to the court what you did and found.

A. I was dressed and lowered down by order of Mr. Powelson to look for boilers, if I could find them. While I was down, crawling down a little ways I found a boiler. I crawled all around it and all over it, and found it to be in good condition. Then, while I was on top of the boiler, I hit my helmet up against a plate overhead, and while crawling up on top of there I found a piece of wire. This wire looked to me not to belong to the ship, so I cut off a piece of it and sent it up on the line. After Mr. Powelson had inspected it, he called me up, and then sent me down again, telling me to saw off a piece of the wire and send it up. I went down again in the afternoon and tried to locate it, and did so after an hour or so. I tied the line to it and pulled in as much slack as I could, then sawed it off. Then I signaled for them to haul it up. They took it on board the *Fern* to Mr. Wainwright, who said it was telophotos wire.

Q. Where was this boiler situated that you found?

A. This boiler was situated about 20 feet forward of the crane, thwart ships.

Q. On which side of the ship?

A. A little over on the port side, sir.

Q. Did you find any other boilers?

A. No, sir.

Q. Did you look for them?

A. Yes, sir.

Q. Where?

A. In the same place and a little to the left of the one I found and abaft of it.

By the COURT:

Q. What prevented you from finding them?

A. A lot of wreckage, sir, over which I had to crawl.

Q. Looking at the plan of the ship, which boiler is it that you think you found?

A. I think it is the forward one. [Here witness pointed out the port forward boiler.]

There being no further questions to ask this witness, his testimony was read over to him and by him pronounced to be correct; after which he withdrew.

Gunner's Mate RUNDQUIST, a former witness, was then recalled, and after having been cautioned by the president of the court that he was still under the oath which he had taken, he testified as follows:

By the JUDGE-ADVOCATE:

Q. Have you read over the record of your testimony given before this court on Monday last?

A. Yes, sir.

Q. Is it correct as recorded?

A. Yes, sir; it is, with the exception of on page 501, end of line 6, strike out "forward of." Same page, line 16, "piece of keel" should read "piece of coal." After that the word "ram-plate" appears several times, and should in each case read "armor-plate."

Q. Is your testimony, as amended, *now correct*?

A. Yes, sir.

Q. Have you been down diving since you gave that testimony?

A. Yes, sir.

Q. Tell us what you did.

A. I went down on Monday afternoon and examined the boilers. I landed in a place that looked to be something like a big shell or compartment. It may have been a boiler blown in. The top part of it was blown away; the sides were sloping up. I could not say what it was. I examined it, and it looked to be a place measuring inside 10 feet wide, and of the same length. I found a big square hole in the bottom of it, and going through, got out among a lot of coal. I was feeling around for some time and got hold of some pipe. I sent up a piece of pipe and also got some asbestus after I had come up out of the square hole.

Then I went to the other side of this place where I came down and found some wire netting. I put my hand through this netting, and it was all carried away, and found something that looked to be the end of a boiler or what appeared to be the end of a boiler. There were lots of nuts. I think there were eleven of them; but I found I could not count them all. They were six-cornered nuts and measured 4½ inches across. The top of the boiler looked to be in good condition. I was sitting on top of this boiler and examining it when I got the signal to come up. I was down only a short time. I also found three 10-inch shells inside this place where I landed when I first came down. That was all that day.

Q. What part of the ship was this place in where you first landed?

A. That was on the port side of the ship. I should say it must have been somewhere about there. [Witness pointed out coal bunker B. 4.]

Q. Where was this boiler that you landed on; can you point that out?

A. No, sir; I do not know where I landed.

Q. Where did you go down when you landed on that boiler?

A. From the lighter on the port side.

Q. Then you went down forward of the crane?

A. Forward of the crane; yes, sir.

Q. Have you looked for any coal on the port side of the ship?

A. Yes, sir; I have been looking for coal. I found some coal after going through the square hole. I was not on the bottom of the ship. It must have been some place inside of the ship. It may have been in a coal bunker.

Q. Did you go down again?

A. Not that day. I went down this morning.

Q. State to the court where you went down and what you found.

A. I had orders to go down and look for powder tanks. I went down from the lighter on the starboard side and landed about midships among a lot of wreckage. I was walking around there and got hold of three 10-inch shells lying flat down. I tried to lift them up, but could not on account of the wreckage. I walked away from there and found a 6-inch shell with the straps on. I sent it up. I also found a 10-inch powder tank, which I sent up. I was walking over a lot of plates and wreckage down there and did not find any more powder tanks, but found different parts of the ship. I then got a signal to come up. The second time to day I landed close to a heavy piece of plating. I examined it and found it to be armor belonging to the transverse armor, because it was about the same thickness all over. I should say that it was about 6 inches thick, as well as I could measure it with my fingers. I went over this and lowered myself over the other

side to what looked to be a wing passage, and this plate was standing up. I examined this for some time, when I got the signal to come up.

Q. When you first landed on the 10-inch shell, were these three shells ranged together?

A. Yes, sir; they were lying side by side.

Q. Noses which way?

A. Toward starboard, I should say, from where I was, down below.

Q. Which way did you walk before you found the 6-inch shell?

A. I found the 6-inch shell close to these—only a few feet apart.

Q. What was the condition of the powder tank you sent up?

A. The top and the bottom of it was gone; the rest of it was in good condition; not split or anything in it.

Q. Empty?

A. Empty.

Q. Which way did you walk when you found the armor that you speak of?

A. I walked aft.

Q. Aft?

A. Aft and to starboard.

Q. Which way was this armor plating standing?

A. It was standing on the end, sloping over to port.

Q. Was it fore and aft, or was it athwartships?

A. No, sir; it was neither way. It was standing in an angle facing the starboard bow and port quarter.

Q. How large was this plate?

A. I did not measure the length of it, but I extended my two arms and could not reach the end of it.

Q. What side of the ship was it in?

A. Starboard side, sir.

Q. Are you sure it did not increase in thickness as it went down?

A. Yes, sir; it may have increased, but if it did, it was very little.

Q. How far from the top did you feel?

A. I felt and followed one edge down until I got to the corner, and felt the same thickness.

Q. How deep did you say it was?

A. Six or seven feet.

By the COURT:

Q. What did it rest on?

A. It looked like it had been jammed in amongst some wreckage, and it also rested on the bottom of the ship and the passageway that I got into. I went over the plate and got into the wing passage on the starboard side of the ship. It was very dark, and I could hardly distinguish anything.

Q. Did you see the armor plate that has been reported in previous testimony?

A. Yes, sir; I seen the armor plate on the port side the first time I went down. This is not the same armor, because that plate had some wood backing, but I could not find any wood backing on this one.

Q. Was not that first plate in the neighborhood of the one you just described?

A. No, sir; the first plate was more on the port side. This one was well out toward starboard.

Q. Did you, on that occasion, feel the side of the ship when you examined that plate?

A. Do you mean the first plate or the one I examined to-day?

Q. The one you examined to-day.

A. Yes, sir; I found the inside of the ship; that is, it felt to me like the inside of the ship. I found the slope of the ship and found beams extending out—4 or 5 feet between each beam.

Q. Were there any bolts in this armor plate?

A. No, sir; I could not feel any. I was feeling all over with my hands, but could not feel either bolts or places for them.

There being no further questions to ask this witness, the testimony was read over to him, and by him pronounced correct, and after being cautioned by the president of the court not to converse upon matters pertaining to the court he withdrew.

There being no further testimony ready to give, the court (at 3.45) adjourned to meet to-morrow, Thursday, at 10 in the morning.

FOURTEENTH DAY.

U. S. L. H. TENDER MANGROVE,
Harbor of Havana, Cuba, Thursday, March 10, 1898—10 a. m.

The court met pursuant to the adjournment of yesterday.

Present: All the members, the judge-advocate, and stenographer, Chief Yeoman F. J. Buenzle, U. S. Navy; Messrs. Hulse and Bisselle having been discharged.

The record of proceedings of yesterday was then read over and approved.

The court was then cleared for deliberation.

The doors were opened at 12 o'clock and the court proceeded to the wreck. On the return of the court from the wreck a recess was taken until 2 p. m.

The court reassembled at the expiration of the recess.

Present: All the members, the judge-advocate, and the stenographer.

The court again visited the wreck.

On returning from the wreck, at 3 p. m., there being no further evidence ready, the court adjourned to meet to-morrow at 10 a. m.

FIFTEENTH DAY.

U. S. L. H. TENDER MANGROVE,
Harbor of Havana, Cuba, Friday, March 11, 1898—10 a. m.

The court met pursuant to the adjournment of yesterday.

Present: All the members, the judge-advocate, and the stenographer.

The court was then cleared for consultation.

Two members of the court visited the wreck, and returned with some of the mud taken from the bottom of the harbor where the wreck of the *Maine* is now lying. This mud, after having been dried, was ignited by a match, and burned readily, the smoke having a strong odor of gunpowder.

At 12.15 the court took a recess until 2 p. m.

The court reassembled at the expiration of the recess.

Present: All the members, the judge-advocate, and the stenographer. Captain Sigsbee also entered the court.

Commander G. A. CONVERSE, U. S. Navy, was summoned by the court as an expert witness, and, having been duly sworn by the president of the court, testified as follows:

Questioned by JUDGE-ADVOCATE:

Q. What is your name, rank, and present station?

A. George A. Converse; commander, U. S. Navy; commanding the U. S. S. *Montgomery.*

Q. How long have you been in the naval service?

A. Thirty-six and one-half years, sir.

Q. Have you made a study of the nature and effects of explosives?

A. Yes, sir; considerable.

Q. Please state to the court what duties you have had on shore which brought you in close contact with this subject.

A. About eleven years at the torpedo station; commencing in 1869.

Q. When were you at the torpedo station last?

A. In June, 1897.

Q. Had you then been in charge of torpedo supplies?

A. Yes, sir; for over four years.

Examined by the COURT:

Q. Did you, while at the torpedo station, have many opportunities to witness the explosion of submarine mines?

A. Yes, sir; very frequent opportunities.

Q. What material—what explosives were used?

A. Gunpowder, nitroglycerin, dynamite, and gun cotton.

Q. What quantities of these materials have you seen used for such purposes at any one time?

A. The largest quantity I have ever seen used consisted of a torpedo containing 300 pounds of gunpowder and 200 pounds of dynamite, all in separate cases—100 pounds in each case—securely lashed together. Single charges of gunpowder of 150 pounds; charges of nitroglycerin of about 100 pounds; charges of dynamite of about 100 pounds, and charges of gun cotton of about 120 pounds.

(A plan of the forward magazine and shell room of the *Maine* was then shown to the witness.)

Q. Examine that blue print, Captain Converse, and tell the court if, in your opinion, one or more of those magazines should explode or partially explode in that ship would such an explosion lift the forward body of the ship partly out of the water?

A. I don't think it would lift the ship out of the water.

Q. Will you please give the court your reasons for thinking so?

A. I think that the body of the ship, water borne in all directions, would tend to offer a resistance which would cause a general effect of a large explosion to be exerted upward; and that an explosion tending to lift the ship up would necessarily have to be diffused over a very large surface.

Q. Suppose that a submarine mine explodes adjacent to the side or bottom of a ship thus water borne; what will be the direction of the explosion?

A. It exerts some effect in all directions, but the most violent effect

in the direction of the least resistance, and that depends entirely u the depth of the explosion below the surface of the water. I believ to be possible to explode moderate charges of gunpowder against sides of a strong ship and do very little damage, if the center of charge is comparatively near the surface of the water; but if the ter of the charge is well below the surface of the water, so that it afford a large amount of water-tamping, then an injury will be d to the ship, while there will be comparatively little disturbance of water at the surface.

Q. Supposing the charge to be a large one, and placed under bottom of the ship where the water is only 8 or 10 feet below the bot of the ship, what will be the direction of the explosion?

A. It would depend very much upon the position of the torpedo w regard to the bottom of the ship; that is to say, whether the torp was in close contact with the bottom, or was lying on the groun some distance below the bottom of the ship, with water interveni If the torpedo contained a large amount of explosive, and were pla in contact with the bottom of the ship, it is my opinion that it wo endanger the ship by blowing a well-defined hole through it. The of the hole depends, of course, upon the distance of the center of charge from the skin of the ship. If, however, the charge is on bottom of the harbor, and a depth of water of several feet interve between it and the bottom of the ship, I think the tendency would to lift the ship bodily; in other words, it would cause a large uphea of water similar in effect to a large wave striking the ship, at a p directly over the mine—would tend to lift the body of the ship at t place exactly as the crest of a wave.

Q. In case of the explosion of a submarine mine under the bot of a vessel, as you have described it, the effect upon a vessel, eit in lifting her bodily, of blowing a hole in the bottom, would dep upon the size of the charge and its proximity to the bottom of ship, would it not?

A. Yes, sir.

Q. If the charge is sufficiently large, and near enough to the bot of the ship, both of these phenomena would take place—ship lifted and the bottom blown in?

A. Yes, sir. A point to be taken into consideration is the natur the explosives employed. Gunpowder is the more moderate explos and tends to produce a greater upheaval of water, as a rule, than the more violent explosives, which, in proportion to their violei seem to cut a hole out of the water, lifting in the shape of a fine sp all that directly above the charge. To illustrate this point, and injury sometimes done by high explosives, I cite the case of *Aquidaban*, which, according to authentic photographs, had h blown completely through from one side to the other by charges of cotton; whereas I have seen wooden vessels of comparatively good s in which large quantities of gunpowder have been exploded, with injuring the vessel to any great extent, there being in the latter c simply a large upheaval of water, to which the vessel rose and exactly as she would have done in a heavy sea.

Q. What is your experience, Captain, in the case of the explosio a submarine mine, as to what becomes of the mine; of the case its

A. I have rarely seen any considerable pieces of mine, whether t consisted of powder or of more violent explosives which have been fou they are almost invariably ruptured and lost.

Q. That is to say they are not blown up?

A. They are blown up. That is noticeable in the case of spar torpedoes, in which I have exploded gunpowder and gun cotton, in cases made of wood, cast iron, copper, and steel, and perhaps other metals. In all my experience I do not recollect to have seen any considerable pieces of any case after an explosion. Sometimes small fragments of cast iron have been seen, and, on one or two occasions, thrown into a boat, indicating a complete demolition of the case containing the explosive.

Q. In the case of a submarine mine that was exploded under the bottom of the ship, and containing sufficient explosive to completely destroy the ship in that region, would your remarks about the submarine-mine case itself apply to the bottom of the ship which is submerged, not referring at all to the interior portion of the ship?

A. In the case of all mines the form of the mine is usually such as to contain only the amount of the explosives used, and hence there must be a rupture of the case for the gases to escape. Were the mine in contact with the ship, or quite close to it, I think the effect on the bottom of the ship would be—depending, of course, upon the size of the mine—to blow to pieces that part of the ship directly over the center of the explosion, and rending and tearing the bottom of the ship from the center in different directions, the amount of damage depending entirely upon the quantity and nature of the explosive employed. In other words, that the violent explosive would cut a hole, blowing that part that was cut out into small fragments, and that the size of the hole would depend entirely upon the size of the charge employed.

Q. Captain, will you please examine the sketches which have been shown you and tell the court whether, in your opinion, the explosion of one or all of these forward magazines, or their partial explosion, would leave the bottom of the ship in the condition which now exists, as represented in these sketches?

(Exhibit H was shown witness.)

A. The sketch might represent two explosions of entirely different natures. That part of the sketch represented here as frame 14½ to frame 18½, aft, in a direction of frame 23, might be produced by the explosion of a comparatively large mine of not violent explosive matter at some distance below the bottom of the ship; whereas the part abaft of frame 23 has all the appearance of the effect produced on iron plates by a high explosive in close proximity to it. There are in all explosions two general effects: First, the upheaval of the water, caused by the direct action of the explosion, followed almost immediately afterwards by the second upheaval of water and mud, being the reaction of the water from the sides and the bottom, which rushes in to fill the crater produced by the first explosion. But the location of this upheaval and the distortion of the keel in the present instance does not appear to have been formed by the secondary effect referred to above. It is too far forward; too remote. It is too far from the place marked "Débris," which must be somewhere about frame 27. If that is 27, then the distance, as marked, from frame 18, will be eleven frame spaces, or 44 feet forward of what would appear to be the crater of the most violent explosion.

Q. Then to what kind of an explosion do you attribute the force that caused this bending of plates and keel on sketch?

A. I am of the opinion that it could be produced by the explosion of a submarine mine containing a large amount of the lower explosives—

gunpowder or similar—not in contact with the ship, but some distanc below it, perhaps on the bottom.

Q. Looking at the sketch shown you, especially at that portion o the keel which has frame 18 on top, and the plates—bent plates—for ward of it, excluding entirely all portion abaft of it, could this par which you are now told to consider have become so distorted from th effects of an internal explosion alone?

A. I do not think it could. I have never seen anything in my experi ence which would lead me to believe that it is possible to produce th effect indicated by any explosion within the interior of the ship in tha immediate vicinity.

Q. Looking at the sketch shown you, and informing you that the for ward 6 inch magazine and the fixed ammunition room were at that par of the keel which is represented as nearly vertical—that is, frame 18 t frame 24—could the conditions as shown forward of frame 24 have bee caused by an explosion of those two magazines, or of any magazin abaft of frame 24?

A. I do not think it could.

Q. Do you think, then, necessarily, there must have been an under water mine to produce these explosions?

A. Indications are that an under-water explosion produce the condi tions there.

Examined by the JUDGE-ADVOCATE:

Q. Looking at the plan of the *Maine's* forward 10-inch and 6-incl magazines, would it be possible for them to have exploded, torn out th ship's side on both sides, and leave that part of the ship forward o frame 18 so water borne as to raise the after portion of that part of th ship, drag it aft, and bring the vertical keel into the condition that yo see on the sketch?

A. It is difficult for me to realize that that effect could have bee produced by an explosion of the kind supposed.

Q. You said in your previous testimony that the distortion of th plates forward of frame 18 could have been caused by an outside min of moderate explosive power. Could such a mine, if producing tha effect, also set fire to the magazine?

A. I am unable to answer that question.

Q. Can you consider it possible, under any circumstances, to have a portion of the 6-inch magazine exploded and not all the powder in tha magazine explode? If so, please state under what circumstances thi would be possible.

A. I think I am positively certain an explosion might occur withou exploding all the powder in separate tanks.

Q. But if the explosion originated on the inside of the magazine without any water on the inside of it, would it not be almost certai that all the powder in that magazine would explode?

A. I think it would be much more certain.

There being no further questions to ask this witness, he was directed to hold himself in readiness to appear before the court when summoned, and to give further evidence, if desired, whereupon he withdrew.

The court then adjourned (at 5.20) to meet to-morrow at 10 a. m.

SIXTEENTH DAY.

U. S. L. H. TENDER MANGROVE,
HARBOR OF HAVANA, CUBA,
Saturday, March 12, 1898—10 a. m.

The court met pursuant to the adjournment of yesterday.

Present: All the members, the judge-advocate, and the stenographer.

The record of the proceedings of yesterday was read over and approved.

Capt. JOHN HAGGERTY, of the Merritt Wrecking Company, was called as a witness, and, having been duly sworn by the president of the court, testified as follows:

By JUDGE-ADVOCATE:

Q. Please state to the court your full name and your profession.

A. John Haggerty, a submarine diver of the Merritt & Chapman Derrick and Wrecking Company.

Q. Are you one of the officers of that company?

A. Yes, sir; I am one of the Merritt's divers. I am in charge of the diving department.

Q. How long have you been a diver?

A. Thirty-seven years, sir.

Q. Have you recently gone down to the wreck of the *Maine*, and outside of the wreck of the *Maine*?

A. Yes, sir.

Q. About how many hours in all have you been down?

A. I could not state that exactly; about seven days, at three and one-half hours per day.

Q. Which side of the ship did you go down?

A. Inside first, looking for the dead bodies.

Q. And then did you go down on the port side or the starboard side?

A. I went down both the port and starboard sides; also into the staterooms, and got the doctor's watch and chain and his rings, and in the afterroom I got those gold cups and some other things.

Q. Did you make an examination of the ship itself on the outside?

A. Yes, sir; partly.

Q. Please state to the court how you found the *Maine* when you examined her.

A. I found the deck—that is, the protective deck—aft, and it lays aft now, with the upper side against the ship's side and the waterways and juts out on an angle of about 30 degrees from the horizontal—that is, the thick steel deck—2-inch plate. It lies on the port side, with the outer edge right in the mud. That is what we are trying to pull out, so as to get inside to examine her.

Q. About what part of her did you find the deck in this condition; how far aft and how far forward?

A. It is just forward of the turret on the port side. The forward part of the turret on the port side is about 2 or 3 feet abaft of that. I could stand on that deck and reach my hands over to the forward part of the turret.

Q. How far forward does this deck go in this condition?

A. About 35 to 40 feet forward of the break. On the bottom it runs a little farther forward than it does on top.

Q. Did you feel the armor belt underneath this protective deck?
A. Yes, sir.
Q. Is the court to understand that this protective deck has bee pulled over to port so as to bring the beams of the deck on top?
A. Yes, sir; the beams are on top.
Q. And you further mean to say that which is now the outer edg was formerly inboard?
A. Yes, sir; that is, when it was on the ship.
Q. And, furthermore, that this edge extends farthei out from th ship's side forward than it does aft?
A. It does. If it is anything, it goes down at more of an angle.
Q. How far forward from the after part can you go under this pr tective deck to feel the armor belt?
A. About 8 feet; I don't think you can get any farther than 8 fee Probably 6 or 8 feet.
Q. And what is the condition of this armor belt for these 8 feet?
A. I found it all right. Another thing I found forward of this poı turret, I think that the iron is broken, and I have not made a goo examination. From the main deck down it looks like a split of abot 2 feet.
Q. Does it seem to be an up-and-down break?
A. Yes, sir; up and down.
Q. How wide do you think this piece of protective deck which ha been folded outboard is?
A. I dare say it is somewhere about 30 feet.
Q. Is it wider forward or wider aft?
A. It looks to me, if anything, to be wider forward, as it runs ou and more down into the mud.
Q. Can you tell whether the break of the protective deck on th inside of the ship runs fore and aft?
A. The break runs athwartship, and the deck is folded back fron forward and to port, and the edge which was forward and is now aft i cut off sharp.

By the COURT:

Q. Captain, have you been down forward of this protective deck?
A. Not yet, sir.

There being no further questions to ask this witness, the testimony was read over to him and by him pronounced to be correct, whereupon he withdrew.

WILLIAM HENRY DWYER, a submarine diver, was then called as a witness by the court, and, having been duly sworn by the president of the court, he testified as follows:

By the JUDGE-ADVOCATE:

Q. Please state to the court your full name and your profession.
A. William Henry Dwyer; a submarine diver.
Q. Are you one of the regular divers of the Merritt Wrecking Company?
A. Yes, sir.
Q. How long have you been a diver?
A. Since 1876.
Q. Have you been down to the wreck of the *Maine* recently?
A. Yes, sir.

Q. About how many hours have you been under water examining the *Maine?*

A. Six hours every day; for three days I have been down examining her.

Q. Please tell the court in what condition you found the wreck of the *Maine* where you examined her.

A. On the starboard side, about 20 feet aft of the midship torpedo tube, about frame 43, I found the armor belt started from the side. From that point forward to about 8 feet forward of the torpedo tube the top of the armor belt gradually leaned out until 8 feet forward of the torpedo tube it leaned out the whole thickness of the armor and about 2 inches more. That is all abaft the turret. About 4 feet forward of the torpedo tube—that is, at about frame 36—the top side; that is, from the top of the armor up to the main deck, leaned out until it was almost horizontal at the forward edge, where the armor is broken off. About 18 inches forward of the end of the armor the skin of the ship below the armor was cut down. The next plate forward was gone completely—that is, between that and the turret. Then, I should judge, about 18 inches beyond the end of the last plate, the side itself was cut down plumb for three plates deep—that is, the skin of the ship. It was cut down level with the bottom, so that I could walk right in on the inner bottom. Inside, the fore-and-aft bulkhead, between the side of the wing passage and the bunker, was intact up to the berth deck, and stood perpendicular.

The bulkhead between the coal bunker and the boiler room was also plumb up to the forward end of the bunker back of the starboard forward boiler; but the forward thwartship bulkhead of that bunker was blown aft and torn out completely. There is a thwartship bulkhead about in line with the after side of the forward boiler, and that was also intact, but the protective deck was lifted 3 or 4 feet up off of it. I went over that thwartship bulkhead into the next bunker—that was by the after boiler of the forward fire room. I went over there and went back through the next bunker nearly to the thwartship pocket. It is a coal bunker abaft of the after boiler in the forward fire room. At that point the protective deck is down in its place. The inner bulkhead of the wing passage is intact right forward—as far forward as frame 30. I went in over the top of the armor, at frame 35, over the three bulkheads, and got in on boiler A, and then on boiler C, and after tearing off the felting and wiring I could feel the boiler itself. Then I found the same on boiler A. At the bottom of the armor belt, all along, it is flush with the side. It is not started out.

As far as the armor extends, which is at frame 35, the bottom edge of the armor is all right, but the top leans out. By boiler A I mean the starboard forward boiler, and by boiler C I mean the next after boiler on the starboard side. That ended the inspection on the starboard side. On the port side I went down at about frame 35, dropping a weight at the end of boiler B. I crossed the top of boiler B and then back across the back of it, along the back of the boiler to the starting point. From there I went to boiler D, striking it at about the middle, and went to the back end of it. I took off the cover and felting and felt the iron in that. I found the boilers not materially damaged. The felting was all burned off the forward part of boiler B. The protective deck over boilers B and D seems to have been broken off at about the middle of these boilers, and the outboard edge is resting just above these two boilers, somewhat at an angle from the fore-and-aft line, sloping to starboard and upward.

Outboard of this outer edge the protective deck is gone altogether. The starboard side of the protective deck rests in its place at the after end of boiler C, but is raised at the after end of boiler A about 3 feet. At the forward end of boiler A it is raised almost vertical and projects out of the water. Along the forward side of boiler D I crawled in under the protective deck and crossed the face of boiler D. On the face of boiler D I could feel the tubes, the hand hold, and the forward furnace door. The boiler appeared to have rolled about one-eighth of a turn aft. From that boiler I came out again, and, crossing over the protective deck, found an opening in the protective deck and went down through that about the inner frame 36, and from there I crawled diagonally forward to starboard, and found the front end of boiler A, took the felting off and felt the plates myself. Returned to this starting point, frame 36, amidships, and went down again under the protective deck, through the same opening, and found boiler C. The A, B, and C boilers appeared to be in their proper positions.

I forgot to mention that the forward bulkhead of the coal bunker abaft boiler C is buckled aft and horizontally. That is all.

Q. Could you not describe that opening in the protective deck through which you passed, a little better?

A. I think it is a hatch.

Q. Did you ascertain how far aft the protective deck was carried away?

A. No, sir.

There being no further questions to ask this witness his testimony was read over to him and by him pronounced to be correct, and, after having been cautioned by the president of the court not to converse upon matters pertaining to the inquiry, he withdrew.

The court then proceeded to the wreck.

After returning from the wreck, the court reassembled, and took a recess subject to being reassembled upon being called upon.

At the expiration of the recess, 10 a. m., Sunday, March 13, 1898, the court reassembled.

Present: All the members, the judge-advocate, and the stenographer. Lieutenant-Commander Wainwright entered the court.

Ensign POWELSON, a former witness, was called by the court, and after having been warned by the president of the court that he was still under oath which he had taken, he testified as follows:

By JUDGE-ADVOCATE:

Q. Mr. Powelson, have you read over the testimony which you gave before this court the last time?

A. Yes, sir.

Q. Is it correct as recorded?

A. Yes, sir; it is with the exception of, on page 549, fourth line, next to last word, "a" should be "the." I wish to change the testimony in regard to the horizontal angle that the keel forward of the frame 18 makes with the keel abaft of frame 18. It was 104 degrees, and I have since ascertained that it is about 94 degrees. The angle had been recorded wrong in my notebook.

Q. Have you made any further discoveries that you wish to testify to before this court since your last testimony?

A. I have taken some soundings, and have cut in prominent points in the keel by taking angles on fixed points of the ship, but have not yet completed my work.

Q. When do you think that your drawings will be ready?
A. I think by to-night or early to-morrow morning.

By the COURT:

Q. Is this work that the court had directed you previously to do?
A. Yes, sir.

There being no further questions to ask this witness, his amended testimony of previous day and his testimony of to-day was read over to him and by him approved and pronounced correct, whereupon he withdrew.

Chief Gunner's Mate ANDREW OLSEN, a former witness, appeared before the court, and having been warned by the president of the court that he was still under the oath which he had taken, testified as follows:

By the JUDGE-ADVOCATE:

Q. Have you read over the record of your testimony given before this court on Wednesday last?
A. Yes, sir.
Q. Is it correct as recorded?
A. It is, with a few exceptions. On page 552, eighth line, second word, change 31 to 41. On page 553, ninth line, "keel" should be changed to "rail," and the same corrections made twice on the tenth line. Page 553, seventh line from the bottom, change "bow" to "buoy." Page 557, tenth line, "25" to "23."
Q. Is your testimony, as now amended, correct?
A. Yes, sir.
Q. Have you done any diving since you gave your last testimony before this court?
A. Yes, sir.
Q. About how many hours in all?
A. About eight or ten hours since I gave my last testimony.
Q. With what object did you go down?
A. To look for the armor plate which I had previously reported.
Q. Did you find it?
A. No, sir.
Q. Are you still confident, in your own mind, that you had found it before.
A. Yes, sir.
Q. How can you account for its disappearance?
A. The only way I can account for it is that it sunk in the mud at that point. It is three weeks now since I found it. There has not been any diving since two weeks at that place.
Q. Have you made any further discoveries while down during these last hours which make you wish to change any of your testimony previously given before this court?
A. No, sir.
Q. Have you made any additional discoveries that you wish to testify to before this court?
A. Yes, sir. About some loose powder that I have reported before. I scooped some of it up and sent it up to Mr. Powelson. It was sent up in a bag.
Q. Powder and mud mixed?
A. Both, sir.

By the COURT:

Q. Has that fore-and-aft bulkhead, which was bent over the 10-inch

shell room, and which was near the plate which you formerly described, disappeared?

A. Yes, sir; I can not locate it.

Q. What plates have you found there lately?

A. Around the vicinity I found a thwartship bulkhead—an armor bulkhead——

Q. In how many parts?

A. One plate. I found something that looked like the bulkhead plate—6-inch—farther in amidships, but I could only feel it for a space of a few inches underneath some wreckage.

Q. How high did the fore-and-aft bulkhead which leaned over the 10-inch shell room appear to you when you were down there, as you stood in the 10 inch shell room?

A. I went down in a hole and the curved part just touched my helmet.

Q. And that bulkhead you have not lately been able to locate?

A. No, sir.

Q. Does not that plate lead you to believe that you have not been down in the same place where you at first found the outside armor plate?

A. My belief is that I was down in the vicinity.

Q. Does not that make you doubt that you have not been down in the same place?

A. Yes; I might not have been down in the same place. I might be within 5 or 6 inches of that place without seeing the plate. You can not tell where you are down there.

Q. That would be a more reasonable explanation than to suppose that this plate has disappeared in some way?

A. Yes, sir.

Q. In locating the points under Mr. Powelson's direction, have you been again to the stem of the ship?

A. Yes, sir.

Q. And you are confident of its position?

A. Yes, sir.

Q. Have you followed up again the keel from the stem?

A. Yes, sir.

Q. Does the bottom of the ship, then, forward of frame 17, appear to be fairly intact?

A. It seems to be in a pretty good condition.

Q. Did you get around at all so as to feel up on the forecastle deck?

A. Yes, sir; I could feel the scupper inside the rail.

Q. At what angle did the deck seem to lie?

A. At about 45 or 50 degrees from the horizontal.

Q. That is, the whole bow lies over on its starboard side?

A. Yes, sir; I am confident of that, because I can put my hand over the port rail and down into the mud.

Q. How high does the mud go up on the deck? Does it come pretty nearly up to the port rail?

A. Taking a point level between the two hawse pipes of the sheet chain and of the bow chain, the mud is just on a level at that point.

Q. Are you understood to have said that this stem lies nearly parallel with the general direction of the ship?

A. Nearly parallel with the general direction of the ship.

Q. What is the direction of the keel of this part of the ship, forward of frame 17?

A. The keel there is up and over to starboard and aft, at an angle of about 60 degrees with the horizontal.

Q. Did you see anything of a deep depression in the mud forward there?

A. Yes, sir; right at the bow of the ship.

Q. Under the bow, do you mean?

A. Right where the keel goes into the mud I found a big hole in the mud. I could go right down into the hole, and extend my arms and feel the top of the hole. It was about level with my armpits.

Q. How deep was it?

A. About 4 or 5 feet.

Q. Was it solid at the bottom?

A. It was muddy. It was seemingly more solid than any other mud higher up.

Q. How wide was this at the top?

A. It extended out from the ship about 4 or 5 feet, then it seems to extend around the keel—abaft and around the keel. I was down at this point yesterday. The ship is rapidly sinking into it and the hole is closing up.

Q. When were you there?

A. Yesterday.

Q. Is it to be understood that this hole extends under the after part of the remainder of the bow?

A. Underneath the keel, as it goes aft; yes, sir. The bottom of the stem is in the hole, and the hole goes around and to starboard, underneath the keel.

Q. How far, according to your observation, has the powder been mixed with the mud; over how great an area?

A. In several places where I found tanks split up, in the seams I found this mud and powder mixed. I think it is powder and mud. When you stirred it up you can not see a thing. When you go outside of the ship and walk in the mud it shows a kind of greenish light color. That is what made me think it is powder. Mr. Powelson has what I brought up.

Q. Does the quantity of this mixed material down there seem to be large?

A. No; not very large, sir. You can find it in small spots here and there.

There being no further questions to ask this witness, his testimony was read over to him, and by him pronounced to be correct; and, after being warned by the president of the court not to converse upon matters pertaining to the inquiry, he withdrew.

Gunner's Mate THOMAS SMITH, a former witness, was called by the court, and having been warned by the president of the court that he was still under the oath which he had taken, he testified as follows:

By the JUDGE-ADVOCATE:

Q. Have you done any diving in the wreck of the *Maine* since you gave your last testimony before this court?

A. I was down for about one hour.

Q. What was your object in going down?

A. To search for the armor plate.

Q. Did you find it?

A. No, sir.

Q. What, then, did you find?

A. I found the one that has been already reported—the transverse armor.

Q. Are you confident you found this side armor plate before, as you reported?

A. The plate that I found now I am sure is not the one I found first when I came here.

By the COURT:

Q. Smith, how can you account for the fact that you can not find this plate?

A. The only thing is that it may be in the mud.

Q. What was there near the plate—the side armor plate—as you originally found it, by which you might identify it?

A. I remember there was some of the frames of the ship stood up vertically.

Q. Did you find those frames?

A. No, sir; I have not found those frames yet. Right near this transverse armor plate there seems to be an inner bottom rolled up over on top of it. I can not tell whether it is an inner bottom or a bulkhead.

Q. Referring to the hole that you testified to on a previous occasion, as having found near the bow of the ship, will you please describe that hole and its location again.

A. The hole is chiefly abaft the keel on the port side on the bow, and extends a little way forward along the stem as it lies.

Q. How deep do you think that it was?

A. I should judge it to be about 7 feet deep.

Q. How wide across the top?

A. About the same, sir.

There being no further questions to ask this witness, his testimony was read over to him and by him approved; and, after having been cautioned by the president of the court not to converse upon matters pertaining to the inquiry, he withdrew.

Gunner's Mate RUNDQUIST, a former witness, was called by the court, and after having been warned by the president of the court that he was still under the oath which he had taken, he testified as follows:

By the JUDGE-ADVOCATE:

Q. Have you done any diving in the wreck of the *Maine* since you last testified before this court?

A. Yes, sir.

Q. About how many hours in all?

A. I went down about eight hours.

Q. Did you have any special object in going down?

A. I was sent down to look for the side armor plate.

Q. Did you find it?

A. No, sir.

Q. Are you confident that you found it before?

A. Yes, sir.

Q. By what localities could you identify the spot where it was before?

A. Well, I won't say I am unable to identify the place. I was not down long enough that day. I happened to come across it more by accident than anything else. I slipped and fell, and landed close to this plate.

Q. And that is the only time you saw it before?

A. Yes, sir; the only time I saw it before.

Q. Then you are sure it was the side armor plate, with the thinner edge up?

A. Yes, sir.

Q. During this recent diving of eight hours have you made any further discoveries that would change your previous testimony?

A. No, sir; I have not.

Q. Have you made any additional discoveries that you wish to testify before this court?

A. Yes, sir; I found lots of shells down there—6-pounders and 10-inch; I also found some powder tanks. I sent some of them up—about six of them; and I also found another boiler—two boilers in all. I only saw one before. That is all.

Q. Where did you find the shell; in what part of the ship?

A. I found it right amidships, forward of the boiler.

Q. Where did you find the tanks?

A. In the same localities; close to it; not very far from it.

Q. In which direction from the shell?

A. Forward and to port.

Q. How many tanks did you send up?

A. I sent up about five tanks.

Q. Were these boilers that you found forward boilers?

A. They looked to be forward boilers, sir. I also found a piece of transverse armor which I never saw before.

By the COURT:

Q. Are you certain, absolutely certain, that the piece of armor which you first reported was as much as 11 or 12 inches thick at the thickest part?

A. I could not say what thickness it was, because I did not measure it. I measured the top of it with my fingers, and then followed the armor plate with my two hands, and it felt to me that it was getting thicker down below.

Q. You are confident it was thicker at one part than it was at another?

A. Yes, sir; I am certain of it.

Q. How far down in the mud did you follow it?

A. I followed it to about one-half a foot down into the mud. It extended way down, sir. I could not say how far down.

By Lieutenant-Commander WAINWRIGHT:

Q. Did you notice any difference in the condition of the wood backing of the transverse and side armor?

A. Yes, sir; on the side armor the backing looked to be all ragged, but on the back of the transverse armor the backing is all in good condition. I also found on the side armor, where the bolts went through the backing, the backing is broken away, and left the part of the bolt uncovered where the wood is gone.

By the COURT:

Q. Was there anything besides the nut on it?

A. I found some rubber gaskets, and it felt soft when I put my hand on the bolt. Nothing else.

There being no further questions to ask this witness, his testimony was read out to him and by him pronounced to be correct; and, after having been cautioned by the president of the court not to converse upon matters pertaining to the inquiry, he withdrew.

Gunner's Mate SCHLUTER, a former witness, was called by the court, and, after having been warned by the president of the court that he was still under the oath which he had taken, he testified as follows:

By the JUDGE-ADVOCATE:

Q. Have you done any diving on the wreck of the *Maine* since your last testimony before this court?

A. Yes, sir; I have been down forward in the magazine for shells and powder tanks.

Q. Is that all the diving you have done?

A. I have been looking for the armor plate, sir.

Q. Looking for the side armor plate?

A. Yes, sir.

Q. Did you find it?

A. No, sir.

Q. What did you find in the way of tanks?

A. I found some 6-pounders, sir. Some of them had the shell in them; some of them had the shell out, and there was still some dark stuff left that looked like powder. I brought them up. Some 6-pounder empty ones with the side burst out, and the top of a 10-inch tank.

Q. How many 6-inch tanks did you send up?

A. Three or four.

Q. What part of the ship did you find them in?

A. Right around the 10-inch magazine. I also found another boiler on the starboard side, in good condition, as far as I could feel.

Q. Was it a forward boiler?

A. Yes, sir; it looked to me like the second boiler forward on the starboard side.

Q. Did you make any discoveries which would now cause you to change any of your previous testimony?

A. No, sir.

Q. Did you make any other discoveries which you wish to testify before this court?

A. No, sir.

There being no further questions to ask this witness, his testimony was read over to him and by him pronounced to be correct; and after having been cautioned by the president of the court not to converse upon matters pertaining to the inquiry he withdrew.

Lieutenant-Commander WAINWRIGHT, a former witness, was then called by the court, and after having been warned that he was still under the oath which he had taken he testified as follows:

By the JUDGE-ADVOCATE:

Q. Have you kept an account of the powder tanks that have been sent up out of the wreck of the *Maine?*

A. Only in my memory.

Q. Can you state to the court about how many have been sent up of each kind, and also their condition?

A. About thirty-five 6-inch and about ten 10-inch. I have seen one 10-inch tank and two 6-inch tanks that contained powder in bags, and the remainder were either empty and contained parts of excelsior packing or parts of powder bags. All the tanks were more or less injured, a large proportion opening lengthwise along the seam. Nearly all the tanks show signs of having been subjected to outside pressure, as if pressed against the powder inside; and their ends are also crushed in.

I saw two 6-inch tanks that were opened at the seams and were pressed down flat, as if by an exertion of considerable force. Those two have more the appearance of having been exploded, in my mind, than any other, and though not the appearance I would expect powder tanks to exhibit after a charge inside had burst. Others are not sufficiently destroyed to give me the impression of having been exploded, although I have never seen powder tanks after an explosion and can only draw my own ideas. The damage to the tanks seems to have been caused by contact with some hard object, and as the shells were found on top of these tanks accounts for the damage.

Q. How was the *Maine* made fast to her buoy at the time of her destruction?

A. Starboard bow chain.

Q. Do you know whether there was any private ammunition on board the *Maine*—that is, ammunition belonging to individuals and not to the Government?

A. None that came to my knowledge.

There being no further questions to ask this witness, his testimony was read over to him and by him pronounced to be correct, whereupon he took his seat as an interested party.

Naval Constructor HOOVER, U. S. Navy, a former witness, was called by the court, and having been cautioned that he was still under the oath which he had taken, he testified as follows:

By the COURT:

Q. In the examination you made of the portion of the wreck above water, recognized as being about frame 17, what do you make out the thin plate in that vicinity to be?

A. It is the forward part of the forward water tank, on the port side, beneath the platform deck at frame 18.

Q. What is the portion painted white?

A. It is a portion of the bulkhead at frame 18, forming the forward side of the 6 inch magazine.

Q. Is the forward side of the water tank crushed in at all, or is it approximately still a plane surface?

A. Nearly a plane surface. It is distorted a little; but it is torn away from its fastenings to frame 18. The after side of this water-tank bulkhead now faces forward.

There being no further questions to ask this witness, his testimony was read to him and by him pronounced to be correct, and after being cautioned by the president of the court not to converse upon matters pertaining to the inquiry he withdrew.

The court then took a recess at 12.20 p. m., to meet to-morrow at 10 a. m.

SEVENTEENTH DAY.

U. S. L. H. TENDER MANGROVE,
Harbor of Havana, Cuba, Monday, March 14, 1898—10 a. m.

The court met pursuant to adjournment.

Present: All the members, the judge-advocate, and the stenographer.

The record of yesterday's proceedings was read and approved.

Lieut. H. HUTCHINS, U. S. Navy, a witness called by the court, appeared, and, after having been duly sworn by the president of the court, testified as follows:

By the JUDGE-ADVOCATE:

Q. Please give to the court your full name, rank, and present station?

A. Hamilton Hutchins; lieutenant, U. S. Navy, serving as navigator on the U. S. S. *Montgomery*.

Q. Is the *Montgomery* at Havana?

A. She is; at buoy No. 3.

Q. How long has the *Montgomery* been at Havana?

A. Since the morning of the 9th instant.

Q. Have you, since her arrival here, been engaged in taking soundings around the wreck of the *Maine*?

A. I have; assisted by Lieutenant Fields, of the *Montgomery*.

Q. Have you with you a chart of these soundings?

A. I have; in original and blue-print copy.

(The witness presented to the court the two charts in question.)

Q. This chart was made from soundings taken under your supervision?

A. Yes, sir; from soundings taken under my supervision on the 9th and 10th instants.

Q. Is it a correct chart?

A. It is; as nearly as possible under the conditions. The depths are correct, although their positions may not be accurate.

(The chart was presented to the court, with the request that it be appended to the record, marked I.)

Q. Was the depth of the soundings reduced to datum line, or the mean low water?

A. No, sir; the soundings around the after body were all taken in the forenoon, and the soundings around the forward body in the afternoon. The time of high water on these two days I made to be about 9.30 on the morning of the 9th.

There being no further questions to ask this witness, his testimony was read to him and by him pronounced to be correct; and, after having been cautioned by the president of the court not to converse upon matters pertaining to the inquiry, he withdrew.

Chief Engineer HOWELL, U. S. Navy, a former witness, was recalled by the court, and, after having been cautioned by the president of the court that he was still under the oath which he had taken, he testified as follows:

By the JUDGE-ADVOCATE:

Q. During the stay of the *Maine* at Havana the last time, what forward coal bunkers were painted, and at what times were they painted?

A. B 3, B 5, B 4, and B 6 were painted. They were painted between February 1 and about February 10. Somewhere between the 1st and the 10th.

Q. Did the paint you used contain dryer and turpentine?

A. The first paint we used was made of red lead, oil, and turpentine. The turpentine gave out, and after that the paint was without any turpentine or dryers. I don't remember when this change took place.

Q. After having painted the bunkers, were they kept closed in such a manner as to endanger any accumulation of combustible gases?

A. No, sir; these bunkers were opened frequently by the battle doors and schutes which led up to the open air on the main deck. The

chutes were opened, and the battle doors were worked to keep them in good order; also these bunkers have air-ventilating pipes leading to the open air.

There being no further questions to ask this witness, his testimony was read over to him and by him pronounced to be correct; and, after having been cautioned by the president of the court not to converse upon matters pertaining to the inquiry, he withdrew.

The court thereupon took a recess, to reassemble upon being called.

At 2 p. m. the court reassembled at the expiration of the recess.

Present: All the members, the judge-advocate, and the stenographer.

Commander CONVERSE, U. S. Navy, a former witness, was called by the court, and having been cautioned that he was still under the oath which he had taken, he testified as follows:

By the JUDGE-ADVOCATE:

Q. Have you read over the record of the testimony that you gave before this court on Friday last?

A. Yes, sir.

Q. Is it correct as recorded?

A. Yes, sir.

By the COURT:

Q. Having somewhat examined the wreck, and being informed as to the conditions existing in the forward part of the ship, as she now is, are you able to express an opinion as to the initial cause of the damage?

A. I am unable to form any opinion from the observations of the wreck which I have seen above water. Assuming that the sketch of the forward part of the ship, from frame 18 forward, is approximately correct, [witness here looked at Exhibit H], it would appear to me that the result indicated or shown might have been produced by an explosion of a large quantity of explosive material of small power, which, by causing a large upheaval of water, would lift the vessel bodily, and at the same time throw it slightly over to starboard.

The rupture of the vertical keel, and of the skin plating on the port side occurred, and that, as the vessel was still farther lifted, the edges of the skin plating came in contact with the water, and by being lifted still farther, these fragments, marked B and A, were bent forward and downward in the position shown; and that, when the vessel slowly sank again, having her starboard bow water borne, would naturally cause the whole bow to slide off to port. The amount by which the piece of A and B are bent forward corresponds approximately with the amount by which the vessel has been shortened. I can not realize that pieces of the bottom as large as A and B could have been blown forward and downward by any interior explosion, the surfaces being, as they were, supported by water on the outside.

Q. Supposing the initial cause of the disaster had been exterior, by such a mine as you have described, and this explosion had exploded the forward magazines of the *Maine*, what would have been the result to the *Maine*, caused by this second explosion?

A. The explosion of a magazine, entirely or partially flooded, containing powder in tanks, would undoubtedly, on account of the water tamping given the charges, produce marked local effects. Escaping gases, if in sufficient quantity, would tend to blow open and back the sides and deck of the ship. It is thought that an explosion of this

kind would be, in its nature, progressive, and that the accumulation of gases would become more and more rapid until all obstacles were removed. Judging also from the effects of explosions which I have witnessed, much of the explosive material in the magazine, if contained in separate cases or tanks, would be dispersed and scattered without exploding.

Q. Frame 18, as shown on the plan of the *Maine*, represents the highest point of the keel at present, and the point at which the keel is broken. Do you think that, in the case of a powder pressure in this compartment of the berth deck, between frames 12 and 18, sufficient to rend asunder the sides of the ship, it would have been possible for any man to have escaped alive?

A. I think it not impossible.

There being no further questions to ask this witness, his testimony was read over to him and by him pronounced to be correct; and, after having been warned by the president of the court not to converse upon matters pertaining to the inquiry, he withdrew.

The court then adjourned at 3.40 p. m. to meet to-morrow at 10 a. m.

EIGHTEENTH DAY.

U. S. L. H. TENDER MANGROVE,
HARBOR OF HAVANA, CUBA,
Tuesday, March 15, 1898—2 p. m.

The court met pursuant to the adjournment of yesterday, but not until 2 p. m., as no testimony was ready during the forenoon.

Present: All the members, the judge-advocate, and the stenographer.

Lieutenant-Commander WAINWRIGHT entered the court.

The record of yesterday's proceedings was read over and approved.

Submarine Diver DWYER, a former witness, was called by the court, and after having been warned by the president of the court that he was still under the oath which he had taken, he testified as follows:

By the JUDGE-ADVOCATE:

Q. Have you done any diving in the wreck of the *Maine* since you gave your last testimony before this court?

A. Yes, sir; about one-half day on Saturday, one-half day on Sunday, all day Monday, and this forenoon.

Q. Please state to the court what you found.

A. I found the bow portion of the ship laying on its starboard broadside, with the stem laying flat on the bottom. The port side of the main deck to the berth deck was torn loose and thrown forward—bent forward—and slightly upward. The break from the main deck started at the forward shutter of the 6-inch gun port. At the same point the main deck was turned up at right angles from its proper position. The break begins aft and extends as far forward as the forward shutter of the 6-inch port. Forward of this the deck is in place, and also the bow. The port 6-inch gun lays across the knightheads; the port 6-pounder is still attached to the deck, and so is the port anchor davit. The 6-pounder is trained aft on its own deck.

(Sketch H was here shown to the witness.

By the COURT:

Q. Do you recognize that, Mr. Dwyer?

A. On the sketch the stem seems to come up out of the mud. In reality the ram is in the mud and the stem lies flat along the mud. For the first eighteen frames from forward the keel of the ship slants upward. The keel is then thrown up from its original position for a distance of about 18 inches; after that it makes a sharp bend up at an angle of 45 degrees, and then it bends down. At this upper point the vertical keel is broken sharp off and bent right down, comes straight down, almost plumb, for a distance of, I should judge, of about 16 feet. The vertical keel is then bent back on itself for a distance of about 2 feet. The flat keel itself, at this lower point, appears to be broken. Then the keel is bent aft and downward for about 20 feet, when the vertical keel appears to end. I could feel the broken end.

By the JUDGE-ADVOCATE:

Q. How much of the vertical keel, as you have described it, had the flat keel still attached to it?

A. That would be difficult to answer. The inner bottom covers the vertical keel almost the whole length of it, so that it is impossible to see whether the flat keel is underneath or not, except that one point, about ten feet forward of the end of the vertical keel, where it is possible to reach down there. At that point, on feeling the vertical keel, it appeared to be crushed—the lower portion up toward the upper portion or reverse.

The inner bottom on the starboard side of the vertical keel appeared to be pressed downward, showing the sharp outline of the vertical keel. It was in that shape from where I found the vertical keel to end for about fifteen feet forward. The port side of the bow appears to be blown outward to within one or two plates of the keel. On the starbard side, abreast of where the keel is bent, there are two bottom plates attached to the keel, and the outer edge of these plates take the same general curvature as the keel does, but with a larger radius.

Q. What is the general direction of the inner bottom which is attached to the keel, and how much of it is attached to different portions of the keel?

A. From frame 18 down to about frame 21 there is none of the inner bottom attached to the vertical keel on the port side, while there is on the starboard side from 3 to 4 feet. Abaft of this the inner bottom is intact, and the end of the vertical keel, except at one point, about 10 feet forward from the after end, where the inner bottom is split from the vertical keel out to port.

Q. How much of the bottom plating is attached to the keel on each side, as far as you could find? What is its general condition?

A. At about frame 16 I counted five plates from the starboard side of the keel down to the mud. They did not seem to be damaged in any way. About 10 feet forward of that point I counted two plates to port of the keel. Farther forward I could not tell how many plates it was. Near the ram I was unable to find the edge of the plates so as to count them, as the plates appeared to be but seams.

Q. Was there any bottom plating attached to the keel on the port side in the vicinity of frame 17?

A. Yes, sir; on the port side of the keel, at frame 17, there was plating attached, but I could not get the general contour of it.

By the COURT:

Q. Mr. Dwyer, did you examine the outside of the ship, from the turret, forward on the starboard side?

A. Yes, sir.

Q. What condition of things did you find there?

A. It was a bewildering mass of bulkhead and iron plates. I could not keep track of it, especially as I had to work from aft forward.

Q. Could you tell us anything about the armor forward of what you testified to the last time?

A. No, sir.

Q. Did you examine the port side abaft?

A. No, sir.

Q. Where the bow of the ship lies on its bilge, as you might say, on its starboard side, is the position of that portion of the ship due to its form, or is it held there by the keel and by the bow, or stem, sticking in the mud?

A. No, sir; I should say it was the form of the ship. I should say, from the position of the keel in relation to the bottom plating, that she is lying a little farther over than on her beam end. In regard to the depression in the mud which you spoke of, I searched for that, and find no hollow such as was described. What I found was that the ram, when the bow fell over on its side, had turned up quite an amount of mud, and on going from the top of that aft I appeared to go down in a hollow; but going from aft forward you find the general bottom, and then the mound raised up to the ram.

Q. You are assuming, then, that the bow went down first?

A. Yes, sir.

Q. And that it struck a blow in the mud and threw this up?

A. Yes, sir; I assume that from the condition of the bottom just forward of the ram.

Q. Just forward of the ram or just abaft?

A. Well, you might say under the ram. There is one point to mention about the main deck. After turning at right angles it takes a general twist over to starboard, so that the point where the hatch is—the forward hatch—the deck was upside down at that point.

Q. What hatch?

A. Forward hatch on the forecastle.

Q. Are you referring to the upper deck or the main deck?

A. Main deck, sir.

Q. Did you find the foremast?

A. No, sir; I did not. I crossed the deck just by the hatch and found a brass plate on the under side of the deck which spoke of "showers."

Q. Did you come across any projectiles or powder tanks when you were in the vicinity of frame 18 or abaft of it?

A. I found a 10-inch shell laying close to the vertical keel on the inner bottom at about frame 21—a percussion 10-inch shell. I found no powder tanks here. Further aft to port I found quite a number of powder tanks, 6-inch, 6-pounder, and 10-inch shell, and also some brass cartridges about the same diameter as the 6-pounders, but they were exploded.

By Lieutenant-Commander WAINWRIGHT:

Q. When you stood in the mud at the point where the keel entered the mud forward, did there appear to be any depression there—a hollow?

A. No, sir; the mud appeared to be, as I stood at the side of the keel, facing toward the ram, on the left, appeared to be turned up higher on one side, and the ram appeared to be going down into the bottom. Following the keel down with my hands toward the point of the ram I found the ram was covered with the mud.

There being no further questions to ask this witness, his testimony was read over to him, and by him pronounced to be correct, and after being cautioned by the president of the court not to converse upon matters pertaining to the court, he withdrew.

The court thereupon took a recess at 3.30

The court reassembled at the expiration of the recess at 4.30 p. m.

Present: All the members, the judge-advocate, and the stenographer.

Lieutenant HUTCHINS, a former witness, was called by the court, and having been cautioned by the president of the court that he was still under the oath which he had taken, he testified as follows:

By the JUDGE-ADVOCATE:

Q. Have you observed and can you tell the court the magnetic direction of the keel of the *Maine*—the after part of the ship?

A. Yes, sir; I examined it by horizontal angles and checked it as near as possible with the compass. It is north 85 degrees west magnetic, looking forward. The ship is lying head north 85 degrees west.

There being no further questions to ask this witness, his testimony was read over to him and by him pronounced to be correct, and after having been cautioned by the president of the court not to converse upon matters pertaining to the inquiry, he withdrew.

Ensign POWELSON, U. S. Navy, a former witness, was recalled by the court, and after having been cautioned by the president of the court that he was still under the oath which he had taken, he testified as follows:

By the JUDGE-ADVOCATE:

Q. Mr. Powelson, have you made the drawings you were directed to make by the court of the wreck of the *Maine*?

A. They are not quite complete; but nearly so.

Q. Will you please explain to the court how you obtained the data for these drawings?

A. I sent divers down to various points on the line of the keel, and then sent a lead line down to the diver; got into a boat; plumbed the point; took soundings and two angles on stations that I had established on the ship and wreckage near the ship. Station A is the mainmast; Station C the port crane; Station D the forward edge of the after smoke-pipe, and Station B is at a piece of wreckage 126 degrees in azimuth from Station A, measured at Station D, and distant 41½ feet from Station D. Station E is the piece of wreckage in azimuth 64 degrees from Station B, measured at Station D, and distant 94 feet from Station D. After establishing several points on the line of the keel, I sent the diver down to get points on the line of the break of the bottom plating on the port side. These points are one, two, three, and four E. These points were angled on, and depths taken as I have described.

Mr. Powelson was then directed to complete the drawing and send it to the court, at Key West, on board the *Iowa*, to-morrow, and attest the correctness over his signature.

There being no further questions to ask this witness his testimony was read over to him, and by him pronounced to be correct, and after having been cautioned by the president of the court not to converse upon matters pertaining to the court, he withdrew.

The court then, at 5.10, adjourned to hold its next meeting on board the battle ship *Iowa*, off Key West, Fla.

NINETEENTH DAY.

U. S. BATTLE SHIP IOWA (1st rate),
Off Key West, Fla., Thursday, March 17, 1898—10 a. m.

The court met pursuant to the last adjournment.

Present: All the members, the judge-advocate, and the stenographer.

The record of last day's proceedings was read over and approved.

The court was then cleared for deliberation.

The doors being opened at 5 p. m., the court adjourned to meet to-morrow at 10 a. m.

TWENTIETH DAY.

U. S. BATTLE SHIP IOWA (1st rate),
Off Key West, Fla., Friday, March 18, 1898—10 a. m.

The court met pursuant to the adjournment of yesterday.

Present: All the members, the judge-advocate, and the stenographer.

The record of yesterday's proceedings was read over and approved.

The judge-advocate informed the court that he had received seven more photographs from Chief Engineer C. P. Howell—the ones that Chief Engineer C. P. Howell had been directed by the court to have taken—and asked permission of the court to place them with Exhibit I.

The request was granted.

The judge-advocate then informed the court that he had received the plan of the wreck of the *Maine* that Ensign Powelson had not finished before the court had left Havana.

The plan was shown to the court, with the request to have it appended to the record, marked L.

The request was granted.

The judge-advocate then informed the court that he had also received the plan of the broken part of the vertical and flat keel of the *Maine* which Gunner's Mate A. Olsen had sent to him, the same not having been quite complete when the court left Havana.

This plan was shown to the court, with the request that it be appended to the record, marked M.

This request was granted.

The judge-advocate also requested to have five views taken by Photographer Hart—which he had requested Photographer Hart to take—and added to Exhibit I.

The request was granted.

The court was then cleared for deliberation.

At 3.50 p. m. the doors were opened, and court adjourned to meet to-morrow at 10 a. m.

TWENTY-FIRST DAY.

U. S. BATTLE SHIP IOWA (1st rate),
Off Key West, Fla., Saturday, March 19, 1898—10 a. m.

The court met pursuant to the last adjournment.

Present: All the members and the judge-advocate.

The record of last day's proceedings was read over and approved.

The court was then cleared for deliberation.

The doors being opened, the court adjourned to meet to-morrow, Sunday, March 20, 1898, at 10 a. m.

TWENTY-SECOND DAY.

U. S. S. IOWA (1st rate),
Off Key West, Fla., Sunday, March 20, 1898—2 p. m.

The court met pursuant to the last adjournment.
Present: All the members and the judge-advocate.
The record of last day's proceedings was read over and approved.
The court was then cleared for deliberation.

The doors being opened, the court adjourned at 4.30 p. m. to meet to-morrow, Monday, the 21st day of March, 1898.

TWENTY-THIRD DAY.

U. S. S. IOWA (1st rate),
Key West, Fla., Monday, March 21, 1898—10 a. m.

The court met pursuant to the adjournment of yesterday.
Present: All the members and the judge-advocate.
The record of last day's proceedings was read over and approved.
The court was then cleared for deliberation.

After full and mature consideration of all the testimony before it, the court finds as follows:

1. That the United States battle ship *Maine* arrived in the harbor of Habana, Cuba, on the 25th day of January, 1898, and was taken to buoy No. 4, in from 5½ to 6 fathoms of water by the regular Government pilot.

The United States consul-general at Havana had notified the authorities at that place, the previous evening, of the intended arrival of the *Maine*.

2. The state of discipline on board the *Maine* was excellent, and all orders and regulations in regard to the care and safety of the ship were strictly carried out.

All ammunition was stowed in accordance with prescribed instructions, and proper care was taken whenever ammunition was handled.

Nothing was stowed in any one of the magazines or shell rooms which was not permitted to be stowed there.

The magazines and shell rooms were always locked after having been opened, and after the destruction of the *Maine* the keys were found in their proper place in the captain's cabin, everything having been reported secure that evening at 8 p. m.

The temperatures of the magazines and shell rooms were taken daily and reported. The only magazine which had an undue amount of heat was the after 10-inch magazine, and that did not explode at the time the *Maine* was destroyed.

The torpedo war heads were all stowed in the after part of the ship, under the ward room, and neither caused nor participated in the destruction of the *Maine*.

The dry gun-cotton primers and detonators were stowed in the cabin aft, and remote from the scene of the explosion.

Waste was carefully looked after on board the *Maine* to obviate danger. Special orders in regard to this had been given by the commanding officer.

Varnishes, driers, alcohol, and other combustibles of this nature were stowed on or above the main deck and could not have had anything to do with the destruction of the *Maine*.

The medical stores were stowed aft, under the ward room, and remote from the scene of the explosion.

No dangerous stores of any kind were stowed below in any of the other storerooms.

The coal bunkers were inspected daily. Of those bunkers adjacent to the forward magazines and shell rooms four were empty, namely: B3, B4, B5, B6. A15 had been in use that day, and A16 was full of New River coal. This coal had been carefully inspected before receiving it on board. The bunker in which it was stowed was accessible on three sides at all times, and the fourth side at this time on account of bunkers B4 and B6 being empty. This bunker, A16, had been inspected that day by the engineer officer on duty.

The fire alarms in the bunkers were in working order, and there had never been a case of spontaneous combustion of coal on board the *Maine*.

The two after boilers of the ship were in use at the time of the disaster, but for auxiliary purposes only, with a comparatively low pressure of steam, and being tended by a reliable watch.

These boilers could not have caused the explosion of the ship. The four forward boilers have since been found by the divers, and are in a fair condition.

On the night of the destruction of the *Maine* everything had been reported secure for the night at 8 p. m. by reliable persons, through the proper authorities, to the commanding officer. At the time the *Maine* was destroyed the ship was quiet, and, therefore, least liable to accident caused by movements from those on board.

EXPLOSIONS.

3. The destruction of the *Maine* occurred at 9.40 p. m. on the 15th day of February, 1898, in the harbor of Havana, Cuba, she being at the time moored to the same buoy to which she had been taken upon her arrival. There were two explosions of a distinctly different character, with a very short but distinct interval between them, and the forward part of the ship was lifted to a marked degree at the time of the first explosion. The first explosion was more in the nature of a report like that of a gun, while the second explosion was more open, prolonged, and of greater volume. This second explosion was, in the opinion of the court, caused by the partial explosion of two or more of the forward magazines of the *Maine*.

CONDITION OF THE WRECK.

4. The evidence bearing upon this, being principally obtained from divers, did not enable the court to form a definite conclusion as to the condition of the wreck, although it was established that the after part of the ship was practically intact, and sank in that condition a very few minutes after the destruction of the forward part.

The following facts in regard to the forward part of the ship are, however, established by the testimony:

A portion of the port side of the protective deck, which extends from about frame 30 to about frame 41, was blown up, aft, and over to port. The main deck, from about frame 30 to about frame 41, was blown up, aft, and slightly over to starboard, folding the forward part of the middle superstructure over and on top of the after part.

ıis was, in the opinion of the court, caused by the partial explosion vo or more of the forward magazines of the *Maine.*

At frame 17 the outer shell of the ship, from a point 11½ feet ı the middle line of the ship, and 6 feet above the keel when in its nal position, has been forced up so as to be now about 4 feet above surface of the water, therefore about 34 feet above where it would ıad the ship sunk uninjured.

ıe outside bottom plating is bent into a reversed V shape (Λ), the r wing of which, about 15 feet broad and 32 feet in length (from ıe 17 to frame 25), is doubled back upon itself against the continu- n of the same plating, extending forward.

t frame 18 the vertical keel is broken in two, and the flat keel bent ı an angle similar to the angle formed by the outside bottom plating. ɜ break is now about 6 feet below the surface of the water, and ut 30 feet above its normal position.

ı the opinion of the court this effect could have been produced only :he explosion of a mine situated under the bottom of the ship at ut frame 18 and somewhat on the port side of the ship.

. The court finds that the loss of the *Maine* on the occasion named ı not in any respect due to fault or negligence on the part of any of officers or members of the crew of said vessel.

. In the opinion of the court the *Maine* was destroyed by the explo- ı of a submarine mine, which caused the partial explosion of two or re of the forward magazines.

. The court has been unable to obtain evidence fixing the responsi- ty for the destruction of the *Maine* upon any person or persons.

W. T. SAMPSON,
Captain, U. S. N., President.
A. MARIX,
Lieut. Com., U. S. N., Judge-Advocate.

The court having finished the inquiry it was ordered to make, journed at 11 a. m., to await the action of the convening authority.

W. T. SAMPSON,
Captain, U. S. N., President.
A. MARIX,
Lieut.-Com., U. S. N., Judge-Advocate.

U. S. FLAGSHIP NEW YORK,
Off Key West, Fla., March 22, 1898.

he proceedings and findings of the court of inquiry in the above ı are approved.

M. SICARD,
Rear Admiral, Commander in Chief of the United States Naval force on the North Atlantic Station.

INDEX TO EXHIBITS.

A.—Precept, with telegrams forming part of it.
B.—Letter from convening authority, permitting certain officers to be present during the inquiry.
C.—Letter from the convening authority upon the same subject.
D.—Sketch of portions of underside of protective deck.
E.—Sketch of protective deck where it shows above water.
F.—Translation of an anonymous letter in regard to a plot.
G.—Letter showing the amount of ammunition on board the *Maine* June 30, 1897.
H.—Sketch showing forward part of the ship under water; keel about as far aft as frame 28, and two plates bent into a V shape.
I.—Photographs of wreck.
K.—Survey of soundings around the wreck of the *Maine*.
L.—Plans of the keel and other permanent points of the wreck.
M.—Plan made by diver of break of vertical and flat keel of the *Maine*, frame 18.

EXHIBITS.

A.

U. S. FLAGSHIP NEW YORK (1st rate),
Key West, Fla., February 19, 1898.

LIAM T. SAMPSON, U. S. N.,
nanding U. S. S. Iowa, Key West, Fla.

ourt of inquiry, consisting of yourself as president, and of
ch E. Chadwick and Lieut. Commander William P. Potter,
tes Navy, as additional members, and of Lieut. Commander
rix, United States Navy, as judge-advocate, is hereby ordered
at noon on Monday, February 21, 1898, or as soon thereafter
ble, for the purpose of inquiring into the circumstances con-
ı the loss by explosion of the United States battle ship *Maine*,
or of Havana, Cuba, on the night of Tuesday, February 15,

t is authorized to hold its sessions on board any ship of the
ntic Squadron, or in the city of Key West, Fla., or in the
he city of Havana, Cuba.
ation of the court is invited to the instructions, concerning
lars to be investigated in the case of the loss or grounding
f the Navy, contained in the United States Navy Regula-

wing-described papers relating to the loss of the U. S. S.
ie occasion referred to are attached to and made part of this

py of a telegram sent by Capt. C. D. Sigsbee, United States
Havana, Cuba, to Commander James M. Forsyth, United
ry, at Key West, Fla., without date, but probably sent on
of February 15, as it was received at Key West, Fla., by
mander William S. Cowles, United States Navy, at 1 a. m.
y 16, 1898, and by the commander in chief at 5.30 a. m. of
6, at Dry Tortugas, Fla.
gram sent by Capt. C. D. Sigsbee, United States Navy, to
nder in chief at Key West, Fla., dated Havana, Cuba, Feb-
898.
t will diligently and thoroughly inquire into all the circum-
ending the loss of said vessel on the date named, and upon
sion of the investigation will report to the commander in
roceedings, all the testimony taken, and the facts which it
established by the evidence adduced, together with its opin-
hat further proceedings, if any, should be had in the matter.
t will also report whether or not the loss of said vessel was,
ision named, in any respect due *to fault* or negligence on the

part of any of the officers or members of the crew of said vessel, and if so, the names of such officers or members of the crew, and in what respect and to what extent any or either of them were so at fault or negligent.

If the court shall be of opinion that further proceedings should be had in the matter, it will include in its report a succinct statement as to the person or persons against whom, and the specific matter upon which, such proceedings should be had.

The court will also report its opinion as to the cause or causes of the explosion, or other incidents that bore directly or indirectly upon the loss of the *Maine*.

It will also record any information that it may be able to obtain by testimony and evidence, as to any person or persons not connected with the Navy of the United States, who are, in its opinion, responsible, in part or wholly, directly or indirectly, for the explosion and loss of the *Maine*, and will include their names, in its opinion, together with the degree of responsibility in each case.

M. SICARD,
Rear-Admiral, Commander in Chief,
U. S. Naval Force on North Atlantic Station.

I certify the above to be a true copy.

A. MARIX,
Lieut.-Com., U. S. N., Judge-Advocate.

No. 1.

FORSYTH, *Key West:*

Tell admiral *Maine* blown up and destroyed. Send light-house tenders. Many killed and wounded. Don't send war vessels if others available.

SIGSBEE.

I certify the above to be a true copy.

A. MARIX,
Lieut. Com., U. S. N., Judge-Advocate.

No. 2.

FEBRUARY 16.

COMMANDER IN CHIEF, *Key West:*

Maine blown up in Habana harbor at 9.40 last night and destroyed. Many wounded and doubtless more killed or drowned. Wounded and others on board Spanish man-of-war and Ward Line steamers. Send light-house tender from Key West for crew and the few pieces of equipment above water. None has clothing other than that upon him. Public opinion should be suspended until further report. All officers believed to be saved; Jenkins and Merritt not yet accounted for. Many Spanish officers, including representatives of General Blanco, now with me to express sympathy.

SIGSBEE.

I certify the above to be a true copy.

A. MARIX,
Lieut. Com., U. S. N., Judge-Advocate.

B.

U. S. FLAGSHIP NEW YORK (1st rate),
Key West, Fla., February 19, 1898.

SIR: Referring to my order of this date convening a court of inquiry, of which you are president, to meet at such place as the president of the court may deem proper, on Monday, February 21, 1898, at noon, for the purpose of inquiring into the circumstances connected with the loss of the U. S. battle ship *Maine* in the harbor of Havana, Cuba, on the night of Tuesday, February 15, 1898, I have to inform you that Capt. Charles D. Sigsbee, United States Navy, commanding the U. S. S. *Maine*, and Lieut. Commander Richard Wainwright, United States Navy, the executive officer, and Lieut. George F. W. Holman, United States Navy, the navigator, and Chief Engineer Charles P. Howell, United States Navy, the chief engineer of that vessel, have been informed of their right to be present during the investigation, to cross-examine witnesses, and offer evidence before the court should they desire to do so.

As the court has been directed to report whether or not the loss of the U. S. S. *Maine* was in any respect due to fault or negligence on the part of any of the officers or crew of said vessel, etc., you will inform the officers and such of the crew as may have filled positions of special responsibility upon the occasion referred to that they have the same right to be present during the sessions of the court, to offer evidence, and to cross-examine witnesses, if they so desire.

Very respectfully,

M. SICARD,
Rear-Admiral, Commander in Chief,
U. S. Naval Force on North Atlantic Station.

Capt. WILLIAM T. SAMPSON, U. S. N.,
Commanding U. S. S. Iowa, Key West, Fla.

I certify the above to be a true copy.

A. MARIX,
Lieut. Com., U. S. N., Judge-Advocate.

C.

U. S. FLAGSHIP NEW YORK (1st rate),
Key West, Fla., February 19, 1898.

SIR: Referring to my communication of this date informing you that Capt. Charles D. Sigsbee, United States Navy; Lieut. Commander Richard Wainwright, United States Navy; Lieut. George F. W. Holman, United States Navy, and Chief Engineer Charles P. Howell, United States Navy, have been informed of their right to be present during the investigation to cross-examine witnesses and offer evidence before the court should they desire to do so, I have to inform you that if, during the progress of the investigation it shall appear that others than those above mentioned should be entitled to appear as defendants, they will be called before the court and informed of their right to be present and cross-examine witnesses and offer such evidence as they may desire.

Very respectfully,

M. SICARD,
Rear-Admiral, Commander in Chief
U. S. Naval Force on North Atlantic Station.

Capt. WILLIAM T. SAMPSON, U. S. N.,
Commanding U. S. S. Iowa, Key West, Fla.

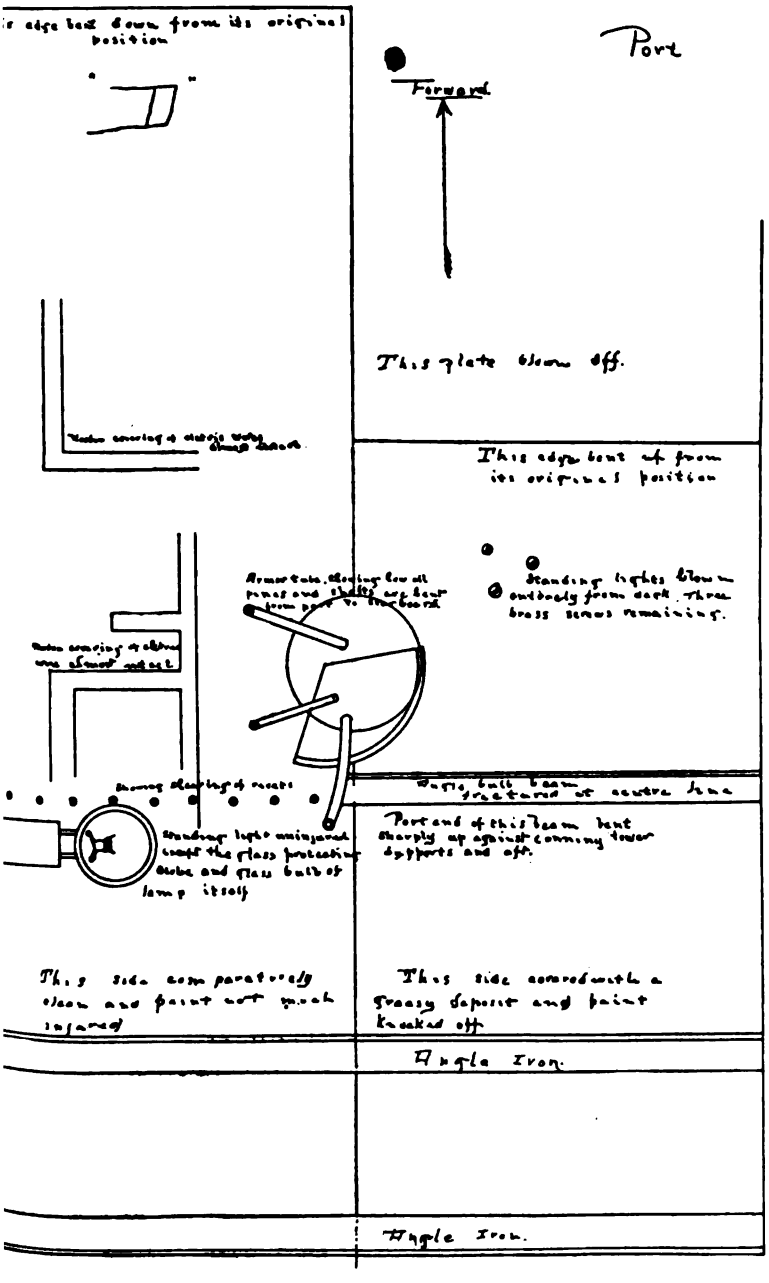
I certify the above to be a true copy.

A. MARIX,
Lieut. Com., U. S. N., Judge-Advocate.

D.

Copy Rough Sketch of

Under side of protective deck under conningtower.



G.

U. S. S. MAINE (1st rate),
Hampton Roads, Va., June 30, 1897.

SIR: In compliance with the commandant's indorsement of the Bureau of Construction letter, No. 1096–E3, of June 23, 1897, directing that a statement of the amount of ammunition of each size stowed in the various ammunition rooms be given, I make the following report, which gives the amount stowed in the ammunition rooms as well as that stowed outside in the handling and passing rooms.

The amount given is the full allowance of ammunition.

Very respectfully,

C. D. SIGSBEE,
Captain, U. S. N., Commanding U. S. S. Maine.

The COMMANDANT, NAVY-YARD AND STATION.

U. S. FLAGSHIP NEW YORK,
Fortress Monroe, Va., June 30, 1897.

Forwarded by direction of commander in chief.

C. H. WEST,
Commander, U. S. N., Chief of Staff.

[Second indorsement.]

NAVY-YARD, NEW YORK, *July 2, 1897.*

1. Respectfully referred to the Bureau of Construction and Repair.
2. This letter is in reply to the Bureau's No. 1096–E3 of the 23d ultimo.

F. M. BUNCE,
Commodore, U. S. Navy, Commandant Navy-Yard and Station.

Forward magazine (Compartment A 6M).—99 full charges for 6-inch B. L. R.; 164 reduced charges for 6-inch B. L. R.; 146 common shell, in slings, for 6-inch B. L. R.; 100 armor-piercing shells, in slings, for 6-inch B. L. R.; 24 shrapnel, in slings, for 6-inch B. L. R.

Forward fixed ammunition room (A 9M).—152 chests 6-pounder steel shell (1,672 rounds); 112 chests 6-pounder common shell (1,232 rounds); 27 chests 6-pounder blank (297 rounds); 17 chests 1-pounder steel shell (1,020 rounds); 11 chests 1-pounder common shell (660 rounds); 10 chests 6mm. cartridge, ball (10,000 rounds); 3 chests .38-caliber cartridges, ball (9,000 rounds).

Forward 10-inch shell room (A 12M).—90 common shell for 10-inch B. L. R.; 74 armor-piercing shell for 10-inch B. L. R.

Forward 10-inch magazine (A 13M).—92 full charges for 10-inch B. L. R.; 88 reduced charges for 10-inch B. L. R.

Reserve magazine (A 14M).—113 full charges for 6-inch B. L. R; 51 reduced charges for 6-inch B. L. R.; 3,400 pounds of spare saluting powder (19 tanks); 100 pounds of shrapnel and impulse powder.

10-inch shell room amidships (C 3M).—90 armor-piercing shell for 10-inch B. L. R.; 90 common shell, loaded and fused, for 10-inch B. L. R.

10-inch magazine amidships (C 4M).—88 full charges for 10-inch B. L. R.; 91 reduced charges for 10-inch B. L. R.

6-inch magazine amidships (C 5M).—101 full charges for 6-inch B. L. R.; 131 reduced charges for 6-inch B. L. R.; 208 common shell, loaded and

fused, for 6-inch B. L. R.; 100 armor-piercing shell for 6-inch B. L. R.; 23 shrapnel, in slings, for 6-inch B. L. R.

After torpedo head and fixed ammunition room (*D 1M*).—8 Whitehead torpedo warheads, filled; 8 Whitehead torpedo wet primer cases, filled; 76 chests of 6-pounder steel shell (836 rounds); 32 chests of 6-pounder common shell (396 rounds); 32 chests of 1-pounder steel shell (1,920 rounds); 20 chests of 1-pounder common shell (1,200 rounds); 20 chests of .45-caliber cartridges, ball (20,000 rounds); 7 chests of .3′-caliber cartridges, ball (21,000 rounds); 100 chests of 6 mm. cartridges, ball (100,000 rounds); 10 chests of .22 caliber cartridges, ball (93,000 rounds); 11 chests of 6 mm. cartridges, blank (11,000 rounds); 7 chests of United States cannon primers, 3,700 rounds; 8 boat ammunition tanks, small arm, 7,000 rounds.

In addition to the shell stowed in the shell rooms there are stowed 10-inch shells as follows:

Forward 10-inch loading room (*A55*).—2 common shell for 10-inch B. L. R.; 2 armor-piercing shells for 10-inch B. L. R.

Forward 10-inch passing room.—2 drill shells for 10-inch B. L. R.

Midship 10-inch loading room (*C1′*).—1 armor-piercing shell for 10-inch B. L. R.; 2 drill shells for 10-inch B. L. R.

Midship 10-inch passing room.—15 armor-piercing shells for 10-inch B. L. R.

I certify the above to be a true copy.

A. MARIX,
Lieut. Com., U. S. N., Judge-Advocate.

EXHIBIT H.

SKETCH SHOWING FORWARD PART OF THE SHIP UNDER WATER, KEEL ABOUT AS FAR AFT AS FRAME 28, AND TWO PLATES BENT INTO A V SHAPE.

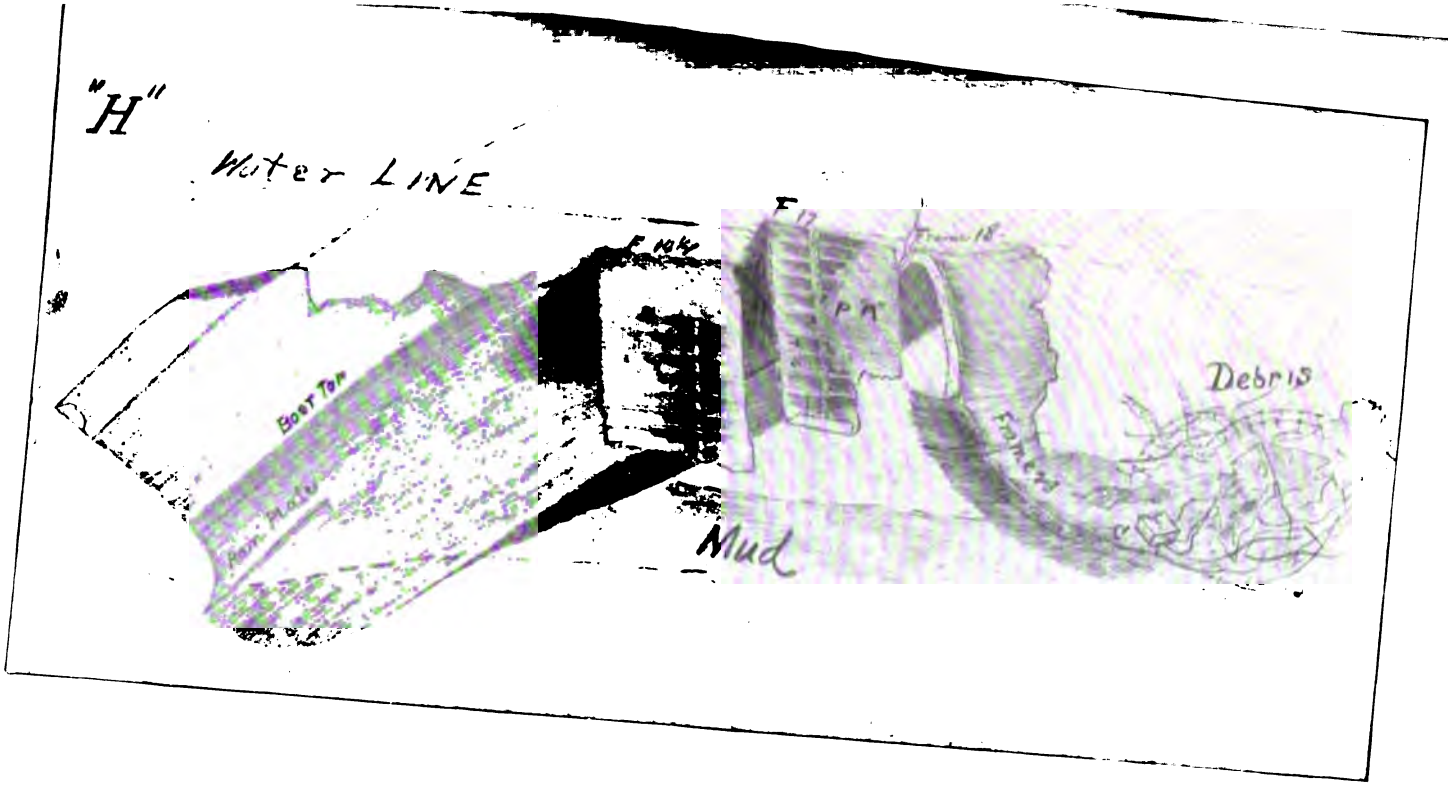
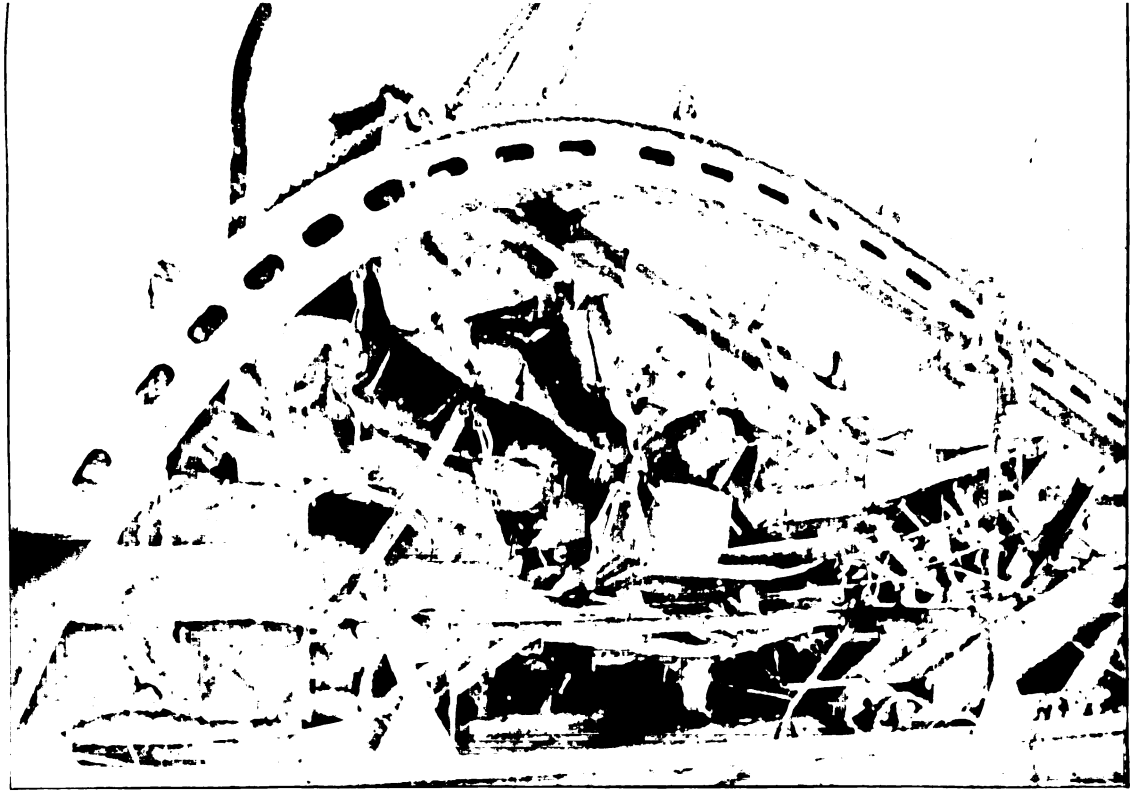
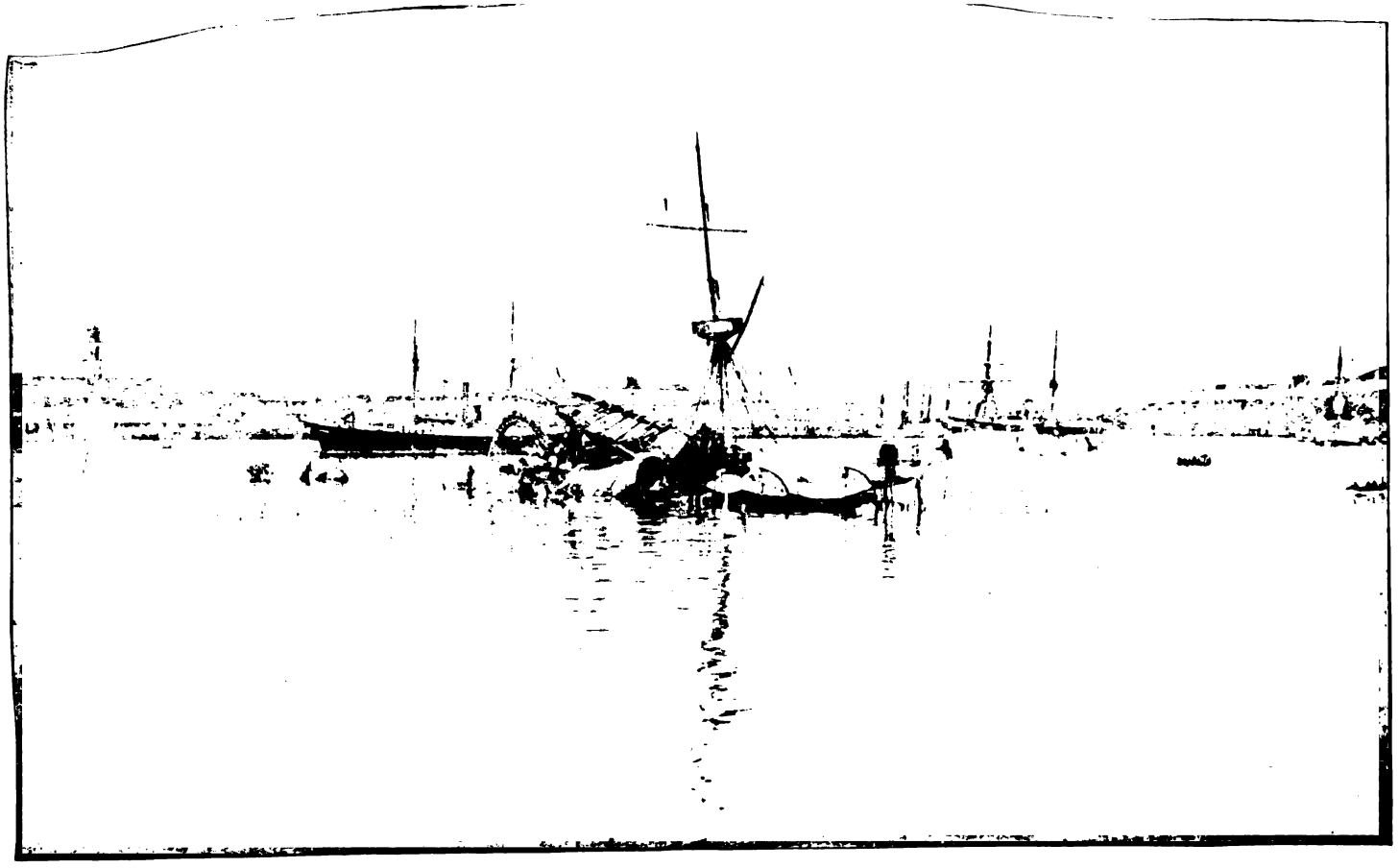
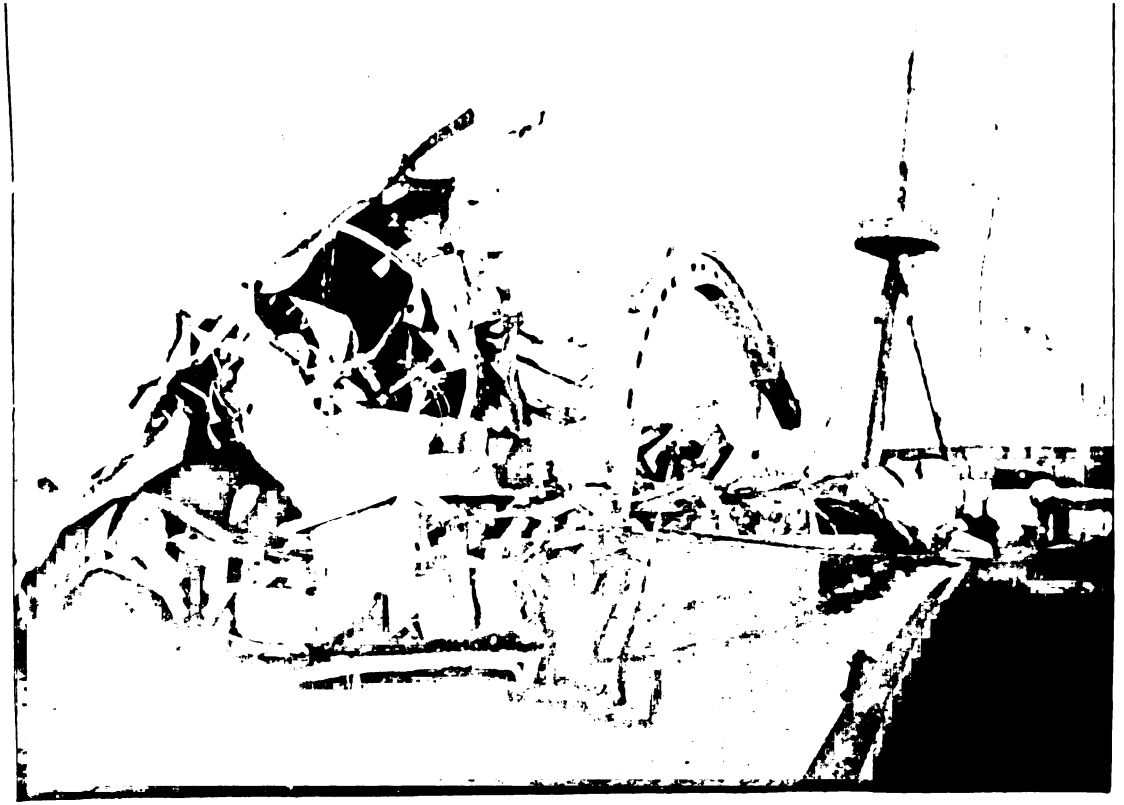

"H"
Water LINE
Boot Top
Mud
Debris

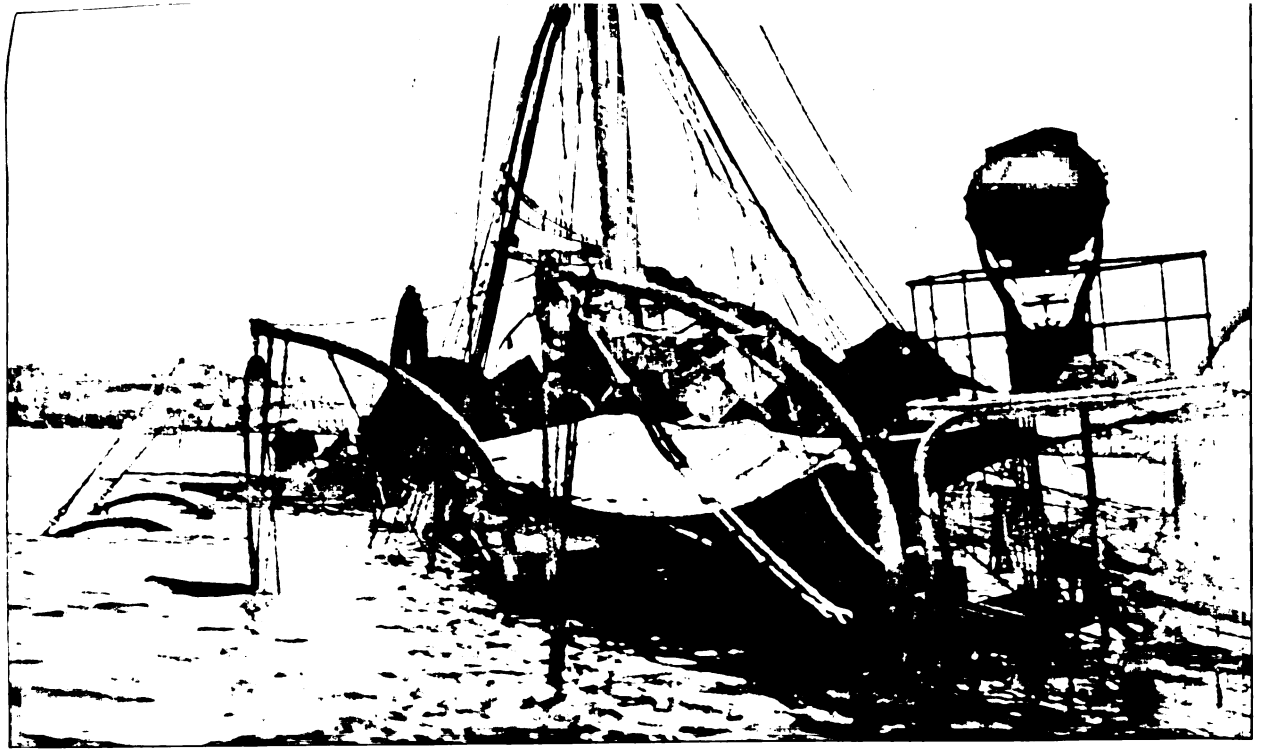
EXHIBIT I.

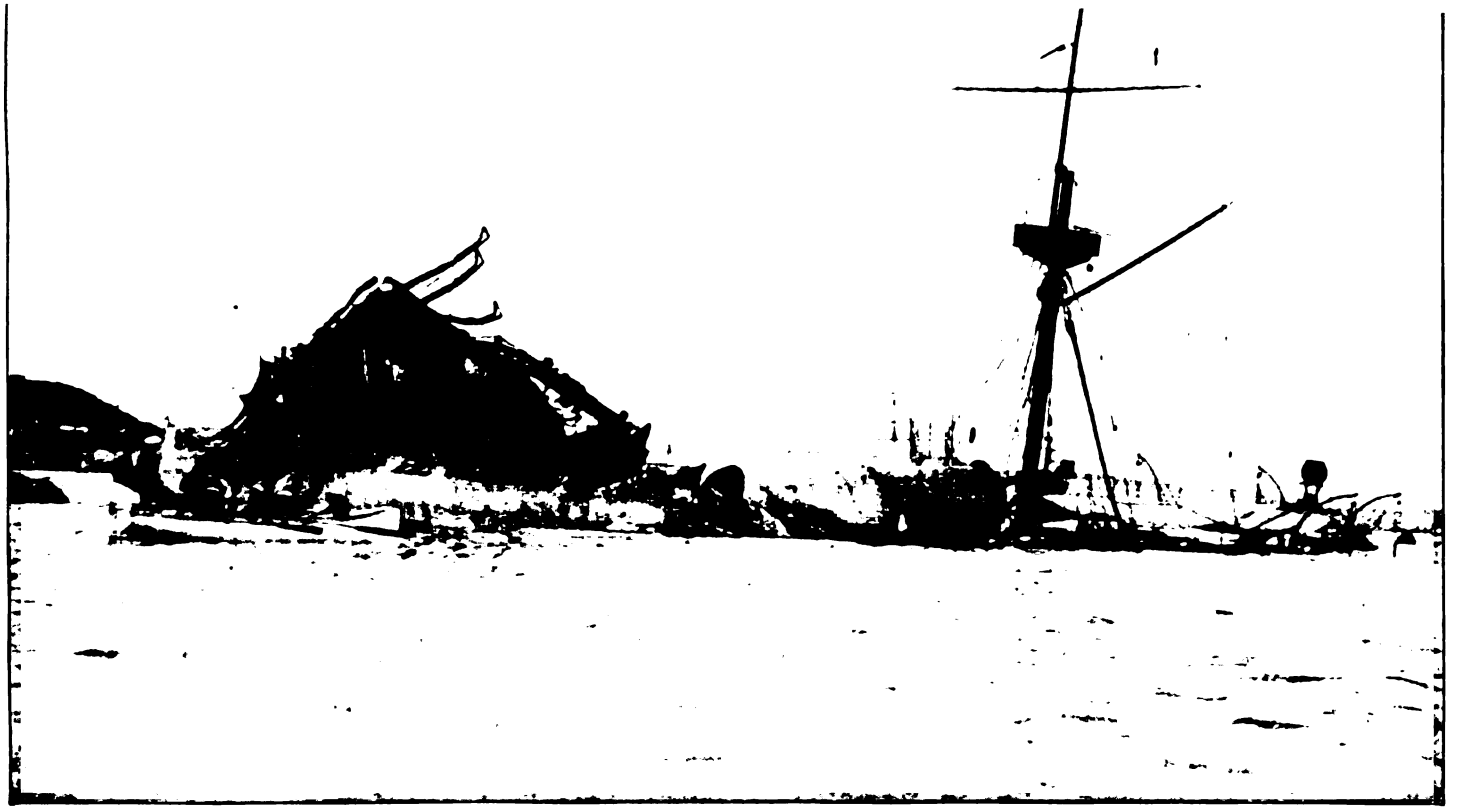
PHOTOGRAPHS OF WRECK.

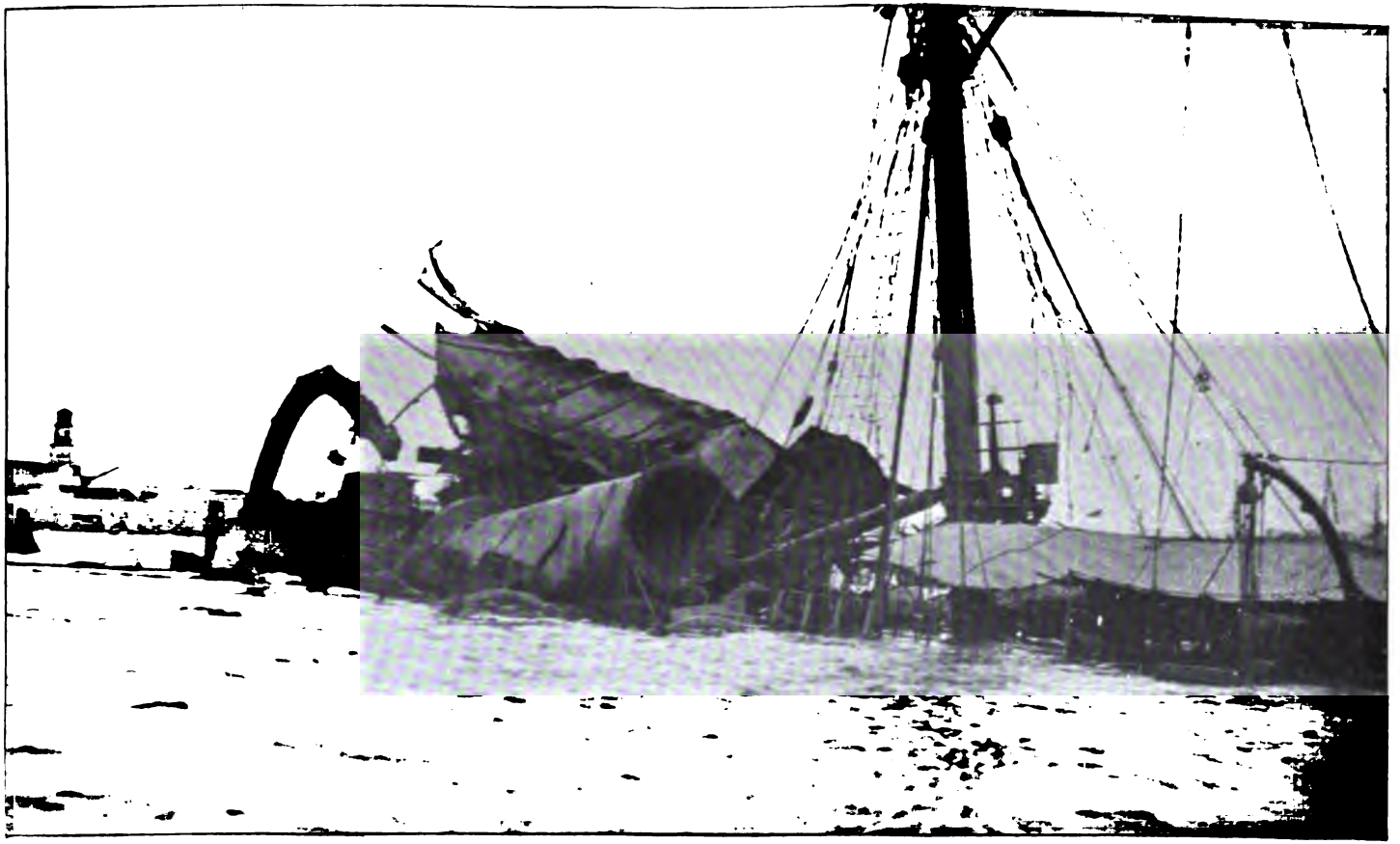


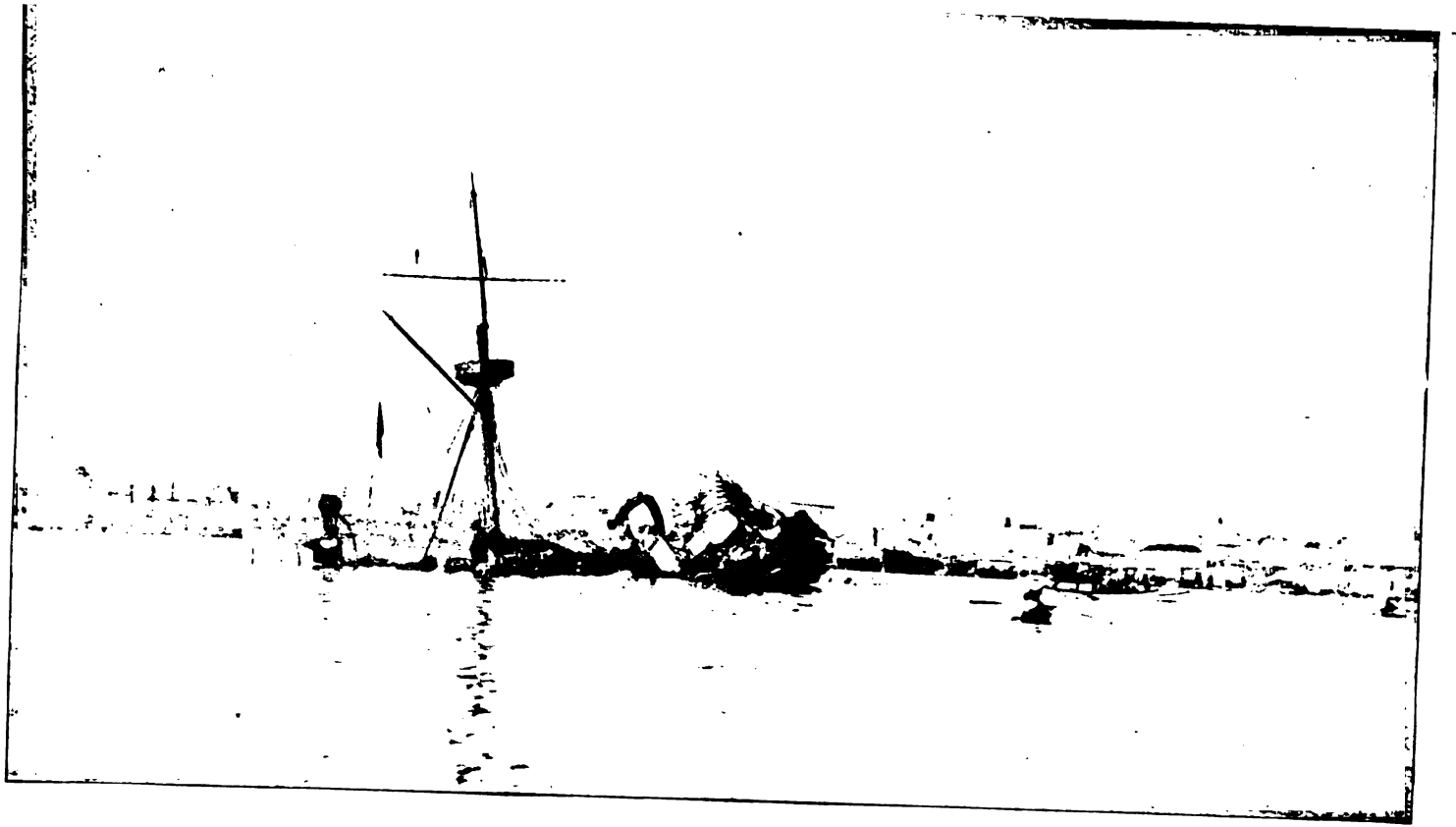












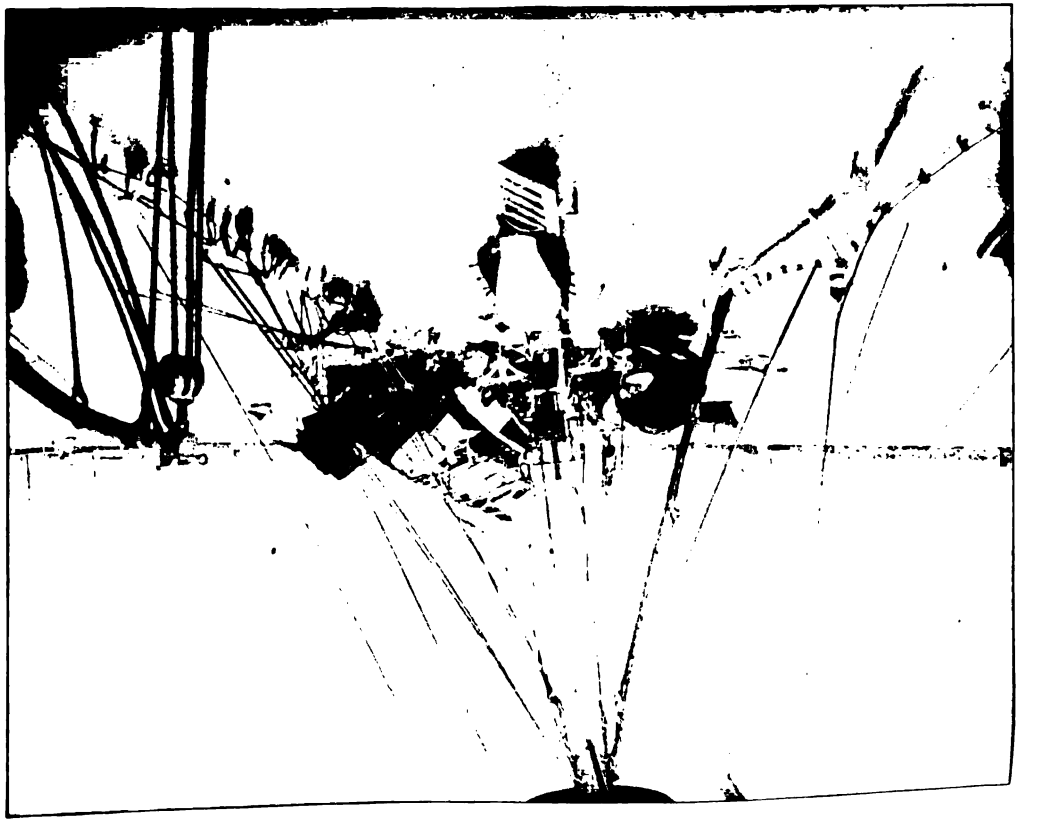


EXHIBIT K.

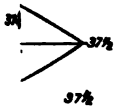
SURVEY OF SOUNDINGS AROUND THE WRECK OF THE MAINE.

"K"

Soundings in feet.

Note

All soundings were taken at edge of wreckage as nearly as possible except the outer-most line of soundings which were taken to show the general depth. No soundings were accepted which did not show soft bottom.



37½

37½

37½ 37½

37½

37½

33

Soundings in the vicinity of the wreck of the

U.S.S. Maine.

Havana Harbor Mar: 9 & 10, 1898.

by

Lieut. H. Hutchins, U.S.N.

assisted by

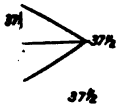
Lieut. W.R.M. Field. U.S.N.

"K"

Soundings in feet.

Note

All soundings were taken at edge of Wreckage as nearly as possible except the extreme line of soundings which were taken to show the general depth. No soundings were accepted which did not show soft bottom.



37½

37½

37½ 37½

Soundings in the vicinity of the wreck of the

U.S.S. Maine.

37½

Havana Harbor Mar: 9 & 10, 1898.

by

Lieut. H. Hutchins, U.S.N.

assisted by

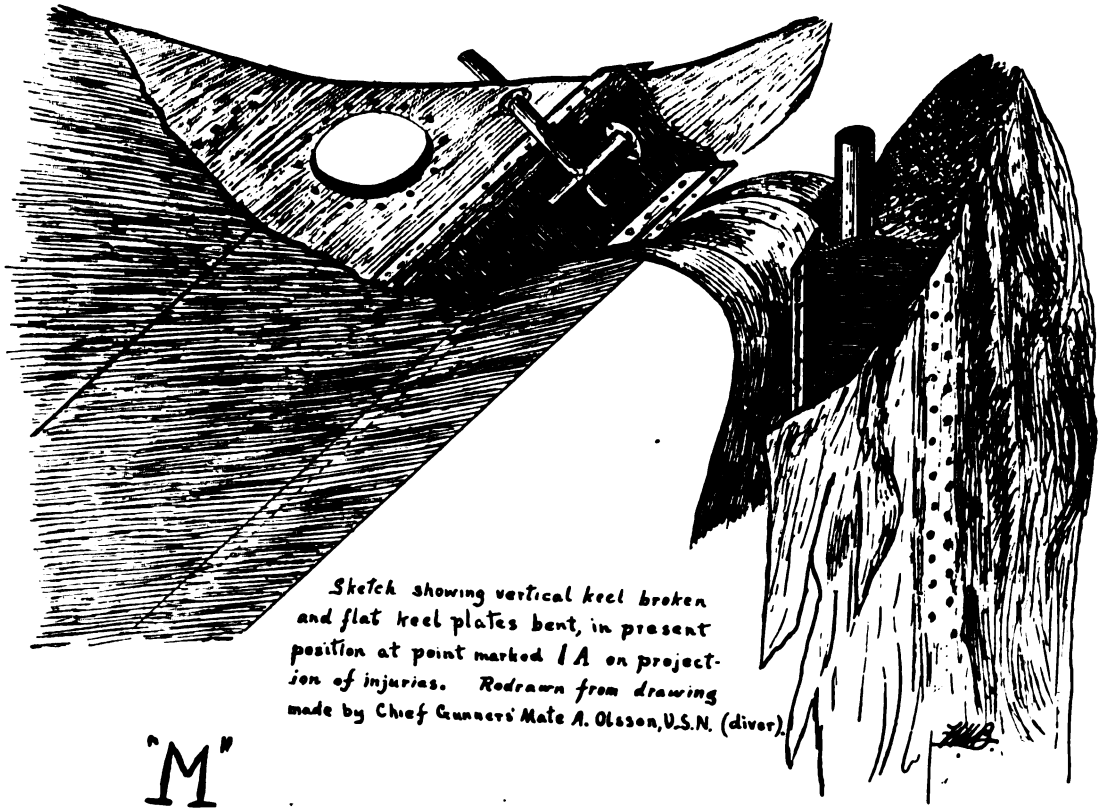
Lieut. W.R.M. Field. U.S.N.

37½

SS

EXHIBIT M.

PLAN MADE BY DIVER OF BREAK OF VERTICAL AND FLAT KEEL OF THE MAINE, FRAME 18.



Sketch showing vertical keel broken and flat keel plates bent, in present position at point marked 1A on projection of injuries. Redrawn from drawing made by Chief Gunners' Mate A. Olsson, U.S.N. (diver).

"M"

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55TH CONGRESS, 2d Session. } SENATE. { DOCUMENT No. 208.

INSURANCE IN THE DISTRICT OF COLUMBIA.

MARCH 28, 1898.—Referred to the Committee on the District of Columbia and ordered to be printed.

Mr. MITCHELL presented the following

MEMORIAL FROM INSURANCE AGENTS, BROKERS, AND SOLICITORS, AND OTHER CITIZENS OF THE DISTRICT OF COLUMBIA, PROTESTING AGAINST THE PASSAGE OF SENATE BILL NO. 3837, TO REGULATE INSURANCE IN THE DISTRICT OF COLUMBIA.

To the honorable the Members of the United States Senate and House of Representatives:

We, the undersigned, insurance agents, brokers, and solicitors doing business in the District of Columbia, enter our earnest protest against section 9 of Senate bill 3837, to regulate insurance in the District of Columbia, now pending before your committee. We object and protest against that section of the bill for the following reasons:

First. It will tend to concentrate the insurance business in the hands of a few large corporations, and will better enable them to maintain high rates and to crush out all small competitors.

Second. It will deprive hundreds of worthy, industrious, and deserving persons from earning a livelihood, and will prevent nearly all the real estate brokers, who now pay $50 per year license, from engaging in the insurance business.

Third. It is not a just and equitable tax, because an agent who does a small business and represents no company, except as a solicitor, pays the same license as a broker who does a very large business and represents many companies.

Fourth. Because it imposes a license tax upon the agent and solicitor, and relieves entirely insurance corporations, who now pay under the existing law $15 each license tax and 1 per cent tax on gross receipts received each year.

Fifth. Because no other trade or profession is required to pay a license tax except a real estate broker.

We trust that you may report against this provision of the bill which requires the payment of a license tax of $50 to write insurance in the District.

This provision is unjust, arbitrary, and absolutely unreasonable. Its tendency and evident purpose is to crush out all small operators and concentrate the entire insurance business in the hands of a favored few.

In this day in which the public sentiment throughout the country is crystallizing against trust legislation and monopoly, we trust that through no action of your honorable body will such unjust and odious

legislation be foisted on this District to the great injury of the pub interested in low rates and to the oppression of the small operators.

Geo. J. Easterday, real estate and insurance, 1410 G stre
Thomas P. Morgan, manager the Mutual Life Insurar Company of New York, 1333 F street NW.
John E. Mitchell, insurance agent, 1321 F street.
James A. Cahill, real estate and insurance, 526 Thirteen street NW.
Chas. A. Shields, real estate and insurance, 1405 F str NW.
Wm. R. Hodges, real estate and insurance, 1317 F str NW.
E. H. Cumpston, manager of Merchants and Manufacture Insurance Company, 13 7 F street NW.
Daniel & Armot, real estate, 1313 F street NW.
Meyers & Anderson, real estate and insurance, 1323 G str NW.
Chas. E. Banes, real estate and insurance, corner Fourteen and G streets NW.
Geo. W. Linkins, real estate, insurance, etc., 800 Nineteen street NW.
John F. Paret, insurance, 1411 G street.
Chas. W. Blackwood, loans and insurance, 704 Fourteen street NW.
Oscar H. Billingsley, insurance, 704 Fourteenth street N
Francis Hufty, loans and insurance, 1406 G street NW.
E. Welsh Ashford, financial agent, insurance, 1410 G str NW.
B. P. Mimmack, attorney and insurance, 1410 G street.
R. A. Phillips, 700 Fourteenth street NW., loans and ins ance.
John Chester, 615 Fourteenth street NW., Presbyteri ministers' fund.
Charles Early, real estate and insurance, 615 Fourteen street NW.
N. Read Johnson, agent Fireman's Fund Insurance Compa of California, 615 Fourteenth street NW.
Wm. F. Holtzman, attorney, real estate, and insurance, 1 F street NW.
R. D. Gudman, agent Spring Garden Insurance Compa 603 Thirteenth street NW.
L. Walter Weed, real estate, loans, and insurance, 609 Th teenth street NW.
A. C. Glancy & Co., real estate and insurance, 1222 G str NW.
F. G. Aukam, 600 F street NW.
J. McL. Carusi, 1222 G street NW.
Geo. H. McMillan, 1222 G street NW.
R. E. Sullivan, manager Northwestern Fire Insurance Co pany, 1302 F street NW.
Addison A. Ashburn, general agent Mutual Reserve L Association, 1302 F street NW.
Jno. H. Walter, real estate and insurance, 1321 F str NW.
Fred McKee, attorney and insurance, 1421 F street NW.

Clarence Thomas, real estate and insurance, 1416 F street NW.
Simon Lyon, 1416 F street NW., attorney and counselor at law, insurance.
M. C. Hooker, loans and insurance, 1417 F street NW.
Wm. S. Minnix, real estate and insurance, 1427 F street NW.
Easterday & Haldeman, real estate and insurance, 1424 New York avenue.
J. D. Free, real estate and insurance, 1424 New York avenue.
Philander A. Bowen, jr., attorney at law and insurance, 1410 G street NW.
Thomas & Thomas, Wyatt Building, State agents The Travelers' Insurance Company, of Hartford, Conn.
A. T. Holtzman, attorney at law, real estate, insurance, 1321 F street NW.
F. W. Gresham, agent Massachusetts Mutual Life Insurance Company, 1213 F street NW.
J. Edw. Fowler, 921 F street, insurance.
F. J. Dieudonnie, insurance, Washington Savings Bank.
Indiana Life Insurance Company, by Ike T. Jobe, manager.
L. W. Spear, Mutual Benefit Life, Ohio Bank Building.
Collins & Gaddis, real estate brokers, 511 Eleventh street NW.
E. E. Ramey, loans and insurance, Ohio Bank Building.
I. H. Evans, 613 F street NW., insurance.
D. I. Murphy, loans and insurance, 941 F street NW.
Thomas W. Fowler, real estate and insurance, 921 F street.
Colhoun & Bright, loans, real estate, and insurance, Warder Building.
W. O. Denison, real estate and insurance, 923 F street NW.
Poe & Treadwell, real estate and insurance, 808 F street NW.
George H. Bliss & Co., 633 F street NW., real estate and insurance.
W. L. Vilkerson, 633 F street NW., real estate and insurance.
Hall & Justice, 613 F street NW., real estate and insurance.
Geo. E. Ansley, insurance, Atlantic Building.
John J. Kleiner, attorney and insurance, 602 F street NW.
Lynch & Terrell, attorneys and insurance, 609 F street NW.
Charles Sickels, loans and insurance, 605 Sixth street NW.
Abraham Fisher, real estate attorney, 512 E street NW.
Harry W. Dowling, insurance broker, 612 E street NW.
Fred W. Reeves, builder and insurance, 617 Fourteenth street NW.
Frank D. Foster, loans and insurance, 615 E street.
William J. Frizzell, building and loan, 615 E street NW.
Stargardter & Griffiths, loans and insurance, 611 Seventh street.
Edwin S. Clarkson, 611 Seventh street NW.
L. S. Emery, agent Mutual Fire Insurance Company, 707 G street NW.
James M. York & Son, insurance and real estate, 912 G street NW.
Joseph A. O'Hare, 1006 F street NW.
Birney & Woodward, attorneys at law and insurance, Eleventh and F streets NW.

Geo. L. Lohrer, insurance agent, 1302 F street NW.
E. J. Gresham, general agent Northwestern Mutual Life 1213 F street NW.
R. J. Donaldson, real estate and insurance, 520 Tenth stree NW.
Points & Gladden, loans and insurance, 507 Twelfth stree NW.
Roland C. Booth, real estate and insurance agent, Tenth an G streets NW.
W. H. Parsons, District agent Ætna Life, Hartford, Conn 1001 F street NW.
Dunlap and Co., 906 F street NW., insurance brokers.
W. F. Salter, Room 5, Warder Building, insurance.
Riley & Taylor, Room 15, LeDroit Building, real estate an insurance.
Thos. W. Hungerford, real estate and insurance, 1219 street NW.
Walshe & Schwartz, real estate and insurance.
Lewis Mundheim, 510 F street NW., 606 F street NW.
John Quinn, 447 Seventh street SW., real estate an insurance.
W. P. Lockwood, real estate, loans and insurance, 700 Tent street NW.
John G. Slater, real estate and insurance, 472 Louisian avenue NW.
Malcolm Hufty, attorney and insurance, 472 Louisiana avenu NW.
Thos. W. Buckey, insurance broker, Atlantic Building.
Walter C. Carroll, attorney and insurance agent, 412 Fif street NW.
B. F. Saul, real estate and insurance, Seventh and L street
J. B. Stahl, real estate and insurance, 319 Four-and-a-ha street.
John J. Byrne, real estate and insurance, 229 Four-and-half street NW.
J. E. Gadsby, real estate and insurance, 526 Thirteenth stre NW.
R. H. T. Leipold, real estate and insurance, 1300 F stre NW.
W. M. King, insurance broker, 2221 Thirteenth street.
L. Richold, insurance broker, 1110 F street NW.
L. A. Hartman, loans and insurance, 633 F street NW.
Caywood & Garrett, Thirteenth street and New York avenu real estate and insurance.
J. E. Roach, general agent Merchants' Mutual Insurance L Company, Builders' Exchange.
Wm. C. Norris, real estate and insurance broker, 617 Fou teenth street.
Geo. Y. Worthington, real estate and insurance, 1410 street NW.
Chas. T. Ramsdell, secretary, 1321 F street NW.
J. Z. Yoder, life and fire insurance broker, 141 Eleventh stre NE.
John Stephen, insurance brokèr.
Edward J. Cahill, agent Milwaukee Mechanics' Fire Insu ance Company, 526 Thirteenth street NW.

Junius J. Pittman, real estate, loans, and insurance.
D. W. Limerick, insurance broker, 928 F street NW.
Henry M. Cutler, agent Masonic Life Association of Western New York, 900 F street NW.
H. C. Emery, agent Firemen's Insurance Company, Baltimore, Md., 707 G street NW.
H. K. Wilson, local treasurer M. R. F. L. Association, 1302 F street.
Robert J. Kirkpatrick, real estate and insurance, 713 Fourteenth street.
Ben B. Bradford, real estate and insurance, 713 Fourteenth street.
H. Clay Stewart & Son, real estate and insurance, 617 Fourteenth street NW.
C. H. Fickling, real estate and insurance, 615 Fourteenth street NW.
M. T. Cockey, real estate and insurance, 617 Fourteenth street NW.
A. T. Whiting, real estate and insurance, 700 Fourteenth street.
Hite & Marshall, real estate and insurance, 1505 Pennsylvania avenue.
Wheat & Meade, real estate and insurance, 1505 Pennsylvania avenue.
Washington Danenhower, 1411 G street NW.
Thomas P. Diggins, insurance agent, 1736 Vermont avenue.
W. S. Miller, general agent United States Casualty Company, 1326 F street NW.
J. D. Murdaugh, insurance, 617 Fourteenth street NW.
E. C. Baumgras, 1014 G street.
W. Mosby Williams, attorney at law and insurance agent, 1421 F street NW.
C. M. Billingsly, insurance broker, 941 F street NW.
R. M. Morrison, real estate and insurance, 600 F street NW.
J. L. French, attorney and insurance, 36 I street NW.
Oscar M. Bryant, real estate and insurance, Warder Building.
D. E. Graves, agent Georgia Home Insurance Company, 604 F street NW.
Jordan & Richardson, real estate brokers, 507 E street NW.
Cook & Kennaugh, real estate brokers and insurance, 505 E street NW.
Charles G. Mortimer, attorney at law and insurance, Glover Building.
Frank B. Jonas, real estate and insurance, 1417 F street NW.
A. L. Koon, insurance broker, 1427 F street.
Zach. M. Knott, real estate, 1425 New York avenue.
Warren B. Choate, attorney and insurance, 1416 F street NW.
Wm. M. Yager, real estate and insurance, 508 Eleventh street.
J. F. Dashiell, insurance broker, 518 Tenth street NW.
K. M. Parker, attorney and insurance, Atlantic Building.
John T. Knott, real estate and insurance, 918 F street.
J. W. Glennan & Co., real estate, 523 Ninth street NW.
S. J. Block, real estate, 604 F street NW.
Hunter & Bro., 510 F street NW.

F. L. Van Auken, loans and insurance, 1304 F street NW
Whitefield McKinley, real estate, 936 F street NW.
Chas. Linkins, insurance broker, 908 G street NW.
Harry G. Kimball, attorney and insurance, 406 Fifth st NW.
Samuel H. Walker, 458 Louisiana avenue NW.
R. M. J. Atwell, real estate and insurance, 204 East Cap street.
Gibson & Weedon, real estate and insurance, 224 East C tol street.
John C. Weedon, agent Harvard Fire Insurance Comp
John F. Donohoe, real estate and insurance, 308 East Cap street.
O. C. Gessford, real estate and insurance, 330 Pennsylv avenue SE.
Bernard Leonard, real estate and insurance, 530 Four a-half street SW.
C. Boyer & Son, real estate, 214 Seventh street SW.
E. L. White, attorney and insurance, 622 F street NW.
Frank C. Horigan, insurance broker, 1302 F street NW.
W. P. Metcalf, attorney at law and insurance, 1331 F str
Martin V. Webb, 125 Indiana avenue NW.
M. S. Carpinter, real estate and insurance, 1423 F street
L. G. Mackall, insurance broker, 3040 Dumbarton avenu
E. L. McClelland, real estate and insurance, 1405 F stre
James A. Marye, broker insurance, 615 Fourteenth street N
Jno. W. Peake, broker insurance, 709 Twelfth street NW
F. B. Dante, broker insurance, 1305 T street NW.
Joseph Harper, 412 B street NE.
Chas. H. Cragin, attorney and insurance, 321 Four-and-a-l street NW.
T. Vierbuchen, insurance agent, 300 B street SE.
F. J. Miller & Co., real estate, insurance, etc.
D. K. Jackson, real estate and insurance.
James F. Shea, 632 Pennsylvania avenue NW., real es agent.
Saml. H. Lewis, attorney and insurance, 631 Pennsylv avenue.
Amnon Behrend, loans and insurance, 615 E street NW.
Richard P. Evans, attorney at law and insurance, 402 Si street NW.
Edwd. C. Moore, real estate, Twelfth and G streets NW.
Geo. E. Emmons & Co., real estate, 1416 F street.
Sam L. Mattingly, 1420 New York avenue NW.
Joseph Bowes, manager Equitable Life, 1226 F street.
Geo. E. Gillard, cashier New York Life Insurance Comp
T. B. Jackson, insurance broker, 329 Spruce street NW.
W. K. Ellis, real estate and insurance, 525 Eleventh st NW.
Goodwin Y. At Lee, notary public and insurance, 36 Corco Building.
H. A. Cobaugh, insurance agent, 2134 I street NW.
David D. Stone & Co., 804 F street NW., insurance and estate brokers.
J. M. Green, 711 Fourteenth street, real estate.

Albert C. Murdaugh, 605 Fourteenth street NW., real estate and insurance brokers.
Edwin L. Franzoni, real estate and insurance, 1335 F street NW.
Posey S. Wilson, insurance, 318 Third street NW., Mutual Life Insurance Co., New York.
Brice & Lipscomb, real estate and insurance, 612 Fourteenth street.
Plant & Turpin, 1429 New York avenue.
Geo. C. Payne & Co., real estate and law, 613 Fifteenth street.
W. Silas Sheetz, real estate, 1407 F street NW.
D. B. Groff, insurance, 1107 I street NW.
P. A. Darneille, loans and insurance, 1339 F street NW.
A. Gaddis, insurance solicitor, 225 A street SE.
Maurice Otterback, insurance solicitor, National Capital Bank Building, city.
Maurice Fitzgerald, real estate and insurance, 512 Four-and-a-half street SW.
Thos. D. Bond, insurance agent and broker, 612 F street NW.
Harry E. Johnson, 941 F street NW., insurance broker.
Geo. C. Gantz, 941 F street NW., insurance broker.
L. M. Saunders, Ohio Bank Building.
John Sherman, 610 Fourteenth street, insurance.
Oscar W. White, 1114 F street NW.
R. G. Crisan, insurance agent, 123 Fifth street NE.
Leo Simmons, 600 F street NW.
Ellerson & Wemple, real estate and insurance, 605 Fourteenth street NW.
R. E. Bradley, real estate and insurance, 1303 F street NW.
D. W. Middleton, agent Ætna Life Insurance Company, 408 Twelfth street NW.
B. F. Crawshaw, Covenant Mutual Life Association, 912 G street NW.
Chas. G. Emack, agent Agricultural of Watertown, N. Y., Montg. Mutual, Washington Loan and Trust Company, city.
Jas. B. Lackey, 1417 G street NW., insurance solicitor.
A. T. Coumbe, 1425 New York avenue.
J. M. Huyck, 1505 Pennsylvania avenue, real estate.
Walter A. Brown, 1423 Pennsylvania avenue, real estate and insurance.
B. Kennon Peter, 1336 F street, attorney and insurance solicitor.
D. Lane Cox, general agent Fidelity Mutual.
W. P. Springer, District manager, Sun Life Association Company of Canada.
Jerome F. Johnson, Equitable Life, 1326 F street NW.
O. C. Warehime, Equitable Life, 1326 F street NW.
T. Turner Smith, Equitable Life, 1326 F street NW.
P. T. Berry, 1214 Thirty-first street, real estate and insurance.
J. D. Entwisle, insurance agent.
Jos. W. Davis, 1218 Thirty-first street.
Levin S. Frey, 3010 P street NW.
J. C. Sheehy, insurance, 1302 F street NW.
H. D. Nicholson, 1208 Thirty-first street NW.

O. D. Swett, attorney and insurance, 529 Seventh street NW.
William Dickson, insurance broker, 1118 Tenth street NW.
Luther L. Apple, real estate and insurance, 602 F street NW.
Fulton R. Gordon, real estate, 930 F street NW.
F. A. Stevens, insurance agent, 526 Thirteenth street.
H. M. Martin, real estate, 1915 Pennsylvania avenue NW.
Westcott & Story, real estate and insurance, 819 Seventeenth street NW.
Wm. B. Hardy, insurance, 419 Eleventh street NW.
A. S. Condry, insurance agent, 511 Eleventh street NW.
J. S. Rains, insurance and merchandise broker, 721 Thirteenth street NW.
Geo. M. Myers, loans and insurance, 1110 F street NW.
Sanders Garland, insurance, 1333 F street.
Geo. W. A. White, cashier The Mutual Life Insurance Company of New York, 1333 F street NW
O. L. Pitney, agent New Hampshire Fire Insurance Company, 1305 F street.
H. M. Schneider, Metzerott Building, real estate and insurance.
E. J. Totten, insurance, 512 Tenth street NW.
Hunter & Bro., commercial and insurance brokers, 510 F street NW.
Galen E. Green, broker, insurance and stocks, 529 Ninth street NW.
William E. Sims, broker, insurance, and loans, 1001 F street.
Caleb S. Miller, room 31, Ohio Bank Building, District agent Mutual Benefit Life Insurance Company, Newark, N. J.
James A. Taliaferro, of A. C. Glancy & Co., insurance, 1222 G street NW.
George H. Hough, Equitable Life, 1326 F street NW.
J. G. Jester, agent New York Underwriters, 1305 F street NW.
John O. Johnson, real estate dealer, 617 F street.
Edward T. Kaiser, real estate dealer, 810 F street NW.
George W. Dickey, insurance, 936 F street NW.

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ɔTH CONGRESS, 2d Session. | SENATE. | DOCUMENT No. 209.

CONDITION OF THE PENSION ROLL.

LETTER

FROM

'HE SECRETARY OF THE INTERIOR,

TRANSMITTING,

ſ RESPONSE TO RESOLUTION OF THE SENATE OF MARCH 21, 1898, A STATEMENT FROM THE COMMISSIONER OF PENSIONS SHOWING, BY CLASSES, THE CONDITION OF THE PENSION ROLL FEBRUARY 28, 1898.

ARCH 28, 1898.—Referred to the Committee on Pensions and ordered to be printed.

DEPARTMENT OF THE INTERIOR,
Washington, March 25, 1898.

SIR: I have the honor to acknowledge the receipt of a resolution of e Senate, dated the 21st instant, as follows:

That the Secretary of the Interior be, and he is hereby, directed to send to the nate the following information: The number of widows of Revolutionary soldiers awing pensions, the number of daughters of Revolutionary soldiers drawing pen-ns, the number of survivors of the war of eighteen hundred and twelve drawing nsions, the number of widows of survivors of the war of eighteen hundred and elve drawing pensions, the number of surviving soldiers of Indian wars from ghteen hundred and thirty-two to eighteen hundred and forty-two drawing pen-ns, the number of widows of soldiers of Indian wars from eighteen hundred and irty-two to eighteen hundred and forty-two drawing pensions, the number of sur-vors of the Mexican war drawing pensions, the number of widows of survivors the Mexican war drawing pensions, army invalids of the war of eighteen hun-ed and sixty-one to eighteen hundred and sixty-five drawing pensions, widows the same drawing pensions, navy invalids of the war from eighteen hundred and ıty-one to eighteen hundred and sixty-five drawing pensions, widows of the same awing pensions, army nurses drawing pensions, number of ex-soldiers drawing nsions under the act of June twenty-seventh, eighteen hundred and ninety, num-r of widows of invalid soldiers of the war from eighteen hundred and sixty-one eighteen hundred and sixty-five drawing pensions under the act of June twenty-ɔenth, eighteen hundred and ninety, navy invalids drawing pensions under the ne act, widows of navy invalids drawing pensions under said act, number of per-ıs drawing pensions under special acts of Congress, and what percentage of men, the one hand, and women and children on the other are drawing pensions by ɔcial acts of Congress.

In response thereto, I transmit herewith a copy of a letter from the ımmissioner of Pensions, of the 24th instant, to whom the resolution ıs referred, supplying as far as practicable the information desired.

Very respectfully,

C. N. BLISS, *Secretary.*

The PRESIDENT OF THE SENATE.

DEPARTMENT OF THE INTERIOR,
BUREAU OF PENSIONS,
Washington, D. C., March 24, 1898.

SIR: I have the honor to acknowledge the receipt, by your reference of the 23d instant, of a resolution passed by the United States Senate, under date of March 21, 1898, calling for a statement showing, by classes, the number of all pensioners on the rolls at this time, and especially the number of persons drawing pensions under special acts of Congress, as well as setting forth what percentage of men, on the one hand, and women and children, on the other, are drawing pensions by special acts of Congress.

In response, I have to make the following statement, showing, by classes, the condition of the pension roll February 28, 1898:

Revolutionary war:	
Widows	7
Daughters	9
War of 1812:	
Survivors	4
Widows	2,547
War with Mexico:	
Survivors	10,312
Widows	8,076
Indian wars, 1832–1842:	
Survivors	2,183
Widows	4,130
War of 1861:	
General law—	
Army invalids	330,672
Army widows and others	93,560
Navy invalids	4,825
Navy widows and others	2,322
Act of June 27, 1890—	
Army invalids	392,834
Army widows and others	117,332
Navy invalids	14,290
Navy widows and others	5,866
Army nurses	644
Grand total	989,613

Touching the pensioners who are on the rolls by special acts of Congress, I regret exceedingly to state that this Bureau is without accurate information on this point. For a number of years past the records, neither of this Bureau nor of the pension agencies, have been kept in a manner to discriminate between pensioners who derive title from the general laws granting pensions and those who are placed thereon by special legislation. I am therefore unable to furnish the information on this point which is required by the United States Senate.

Very respectfully,

J. L. DAVENPORT,
Acting Commissioner.

Hon. C. N. BLISS,
Secretary of the Interior.

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5TH CONGRESS, 2d Session. } SENATE. { DOCUMENT No. 210.

PRELIMINARY REPORT, MARINE-HOSPITAL SERVICE.

LETTER

FROM

HE ACTING SECRETARY OF THE TREASURY,

TRANSMITTING,

I RESPONSE TO RESOLUTION OF THE SENATE OF MARCH 21, 1898, COPY OF THE PRELIMINARY REPORT OF THE MARINE-HOSPITAL SERVICE FOR 1897.

ARCH 28, 1898.—Referred to the Committee on Public Health and National Quarantine and ordered to be printed.

TREASURY DEPARTMENT,
Washington, March 25, 1898.

SIR: In response to the resolution of the Senate, No. 311, March 21, 98, I transmit a copy of the preliminary report of the Marine-Hospital rvice for the fiscal year 1897, together with a letter from the Supervis- g Surgeon-General, from which it will be seen that the printed reports the Marine-Hospital Service, being volumes requiring much labor in eir preparation, are generally received from the Public Printer a con- lerable time subsequent to the close of the fiscal year, and are gen- ally made to include the transactions of the service to the date of the port.

The report for 1896, dated November 1, was not received from the iblic Printer until March, 1897.

I have the honor to remain, respectfully, yours,

O. L. SPAULDING,
Acting Secretary.

The PRESIDENT OF THE SENATE.

TREASURY DEPARTMENT,
OFFICE SUPERVISING SURGEON-GENERAL
MARINE-HOSPITAL SERVICE,
Washington, D. C., March 24, 1898.

SIR: In response to the resolution (No. 311) adopted by the Senate arch 21, 1898, and received in this Bureau on the 23d instant, I ansmit herewith a copy of the preliminary report upon the operations

of the Marine-Hospital Service for the fiscal year ended June 30, 1897, together with such operations of the Service to the date of the report which I transmitted to you in November, 1897.

While this report contains much more information than is included in the Annual Report of the Secretary of the Treasury for 1897, it is not the complete report which is annually printed by the Bureau.

The printed report is usually prepared in September and October, but owing to the epidemic of yellow fever in the South and the extraordinary amount of labor thrown upon the Bureau in those months it could not be then prepared. A similar delay was caused in the preparation of the report for 1893 for the same reason, viz, the prevalence of yellow fever, then at Brunswick, Ga.

Many of the facts which will be included in the annual report for 1897 have been briefly published in the public-health reports of this Bureau, which are issued weekly; but some of the facts and conclusions with regard to events during the last fall must necessarily be deferred for publication in the annual report for 1898, inasmuch as the full information and the detailed reports have been received in the Bureau subsequent to the date of the annual report for 1897.

I have the honor to remain, respectfully, yours,

WALTER WYMAN,
Supervising Surgeon-General Marine-Hospital Service.

The SECRETARY OF THE TREASURY.

PRELIMINARY REPORT, MARINE-HOSPITAL SERVICE, FOR FISCAL YEAR ENDING JUNE 30, 1897, TRANSMITTED TO THE SECRETARY OF THE TREASURY, NOVEMBER 20, 1897.

MARINE-HOSPITAL SERVICE.

The Supervising Surgeon-General of the Marine-Hospital Service reports that the 21 marine hospitals are in good condition and that the seamen at the 96 hospitals at minor ports where they are treated, either by officers of the service or by special arrangement, have been well cared for. During the fiscal year ended June 30, 1897, the total number of patients treated at the hospitals and the dispensaries was 54,477, of which number 12,154 were treated in hospital and 42,323 as out-patients.

Although the total number of patients treated was 673 in excess of the total number treated during the previous fiscal year, the total expenditures from the marine-hospital fund ($538,356) were $21,000 less than for the previous year. The total expenditures for 1896 were $16,000 less than for the preceding year (1895), so that for the fiscal year ending June 30, 1897, the total expenditures were $37,000 less than the expenditures for the year 1895. This saving has been accomplished chiefly by systematic inspections and close surveillance of the operations at each port and by circular instructions preventing unnecessary admissions to and undue detention in contract hospitals. It has been effected without restricting proper relief to the beneficiaries of the service, and liberal provision has been made to keep the hospitals well supplied with furniture, instruments, and other appurtenances.

Professional aid was given to other branches of the Government service as follows:

(1) *Aid to the Life-Saving Service.*—During the year ended June 30, 1897, there were 1,850 applicants for the positions of keepers and surfmen in the Life-Saving Service examined physically, and 68 were

ɔcted on account of physical defects. Two hundred and forty-two ims for pensions and other benefits provided by the act of May 4, 2, made by the keepers and crews of the Life-Saving Service have ɔn passed upon in the office of the Surgeon-General.

2) *Aid to the inspection service of steam vessels.*—During the year ; pilots were examined with regard to their ability to distinguish ors, and 24 rejected on account of color blindness.

3) *Aid to the Revenue-Cutter Service.*—Seven candidates for the posi- n of cadet were examined physically, and 395 seamen were examined or to enlistment in the Revenue-Cutter Service, and 13 rejected.

4) *Aid to the immigration service.*—Medical officers of the Marine- ɔspital Service have been specially detailed for medical inspection of migrants at the following ports: Portland, Me.; Boston, New York, iladelphia, Baltimore, New Orleans, San Francisco, and Portland, eg. The regular officers on duty at other ports were available for is service when occasion required. The following summary shows ɔ number of immigrants inspected:

rtland, Me	428
ston	11,605
w York	199,190
iladelphia	11,097
ltimore	6,686
w Orleans	1,358
rtland, Oreg	125
n Francisco	1,658

In the purveying division of the Bureau, 500 requisitions for medical d other supplies for 21 marine hospitals and 53 additional relief ations of the service have been filled. Twelve national quarantine ations, 3 detention camps, and the immigration service at New York, ve also been supplied for the most part through this division.

The total available amount of the marine hospital fund during the ar 1897 was $794,071.10; expenditures were $538,356.68, leaving on nd at the close of the fiscal year a balance of $255,714,42.

The balance of the appropriation for the prevention of the spread of idemic diseases, available June 30, 1897, was $474,674.86, but in the erations of the service in connection with the prevalence of yellow ver in the South this balance will be materially reduced.

The necessity of legislation to secure proper shelter for deck crews Western rivers, to which attention was especially called in the last port of the Surgeon-General, has been met by a provision in the act Congress approved March 3, 1897, requiring every steamboat plying on the Mississippi River or its tributaries to furnish an appropriate ace for the crew with protection from the cold, winds, and rain. This bject is one that has long engaged the attention of the marine hospital rgeons, who have made frequent reports thereon, and this action of ngress will be productive of much relief, although the act does not ke effect until June 30, 1898.

Legislation was also enacted in the sundry civil bill approved Feb- ary 19, 1897, authorizing the Secretary of the Treasury to grant to edical officers commissioned by the President leaves of absence for e same periods of time and in the same manner as is now authorized be granted to officers of the Army by the Secretary of War. The rgeon-General states that this act of Congress will prove of great nefit to the corps, as it permits officers to whom the regular leave of sence could not be given in one year to be credited with the same in e succeeding year—the leave of thirty days each year, when not used, be cumulative for a period of four years. Many officers desire to ilize accumulated leave for special study and improvement.

The discipline of the corps is reported as being excellent.

There were six admissions to the grade of assistant surgeon after due examination in accordance with law. To meet the growing demands of the service, new regulations have been prepared and will shortly be issued. Details of officers have been made during the year for the representation of the service at the principal national medical and sanitary conventions in the United States, and also to international meetings of like character at Montreal, Mexico, Venice, Warsaw, Brussels, and Berlin. The reports of the officers thus detailed contain much valuable and practical information.

The Surgeon-General invites attention to the excellent work done by the officers of the corps during the recent visitation of yellow fever in the South. Medical officers were assigned to duty in the infected districts, and although a number of them were not immune to yellow fever, nevertheless they responded with alacrity and performed their duties with judgment and efficiency.

Three officers contracted yellow fever and one met death by accident in the line of duty.

Medical and surgical statistics for the fiscal year 1896 have been tabulated, and a series of articles have been contributed by the officers of the corps on topics relating to their professional work and observations during the year, including historical sketches of several of the marine hospitals and a report of the exhibit of the workings of the service made at the Tennessee Centennial Exposition at Nashville, Tenn., January to November.

The Surgeon-General calls attention to the increased work of his Bureau, and in illustration cites the number of letters (9,750) written during the fiscal year 1897, as compared with the number (5,650) written during the fiscal year 1890.

To meet the increased labor of the Bureau by recent legislation, it has been necessary to request, in the estimate forwarded, a slight increase of clerical force.

PUBLIC HEALTH SERVICE.

Under this head the Surgeon-General gives a brief history for the year of cholera, smallpox, plague, and yellow fever, and the Bureau measures adopted with regard to each, and discusses also the question of leprosy in its relation to the United States.

CHOLERA.

There has been no especial alarm caused by cholera, although it still exists in India, China, and Japan. In the Calcutta district in India, from March 6 to May 29, 1897, there were 1,310 deaths. In Japan, during the summer, there was a reappearance of cholera in 16 different places, but it gained little headway. The appearance of cholera in Japan and China is now a matter of greater moment to the United States than at any previous time, owing to the rapid growth of commerce between those countries and the Pacific coast.

SMALLPOX.

Smallpox is reported as having appeared in 16 States, covering 29 localities, during the period between November 1, 1896, and November 1, 1897. In the year previous it appeared in 22 States and 74 localities. The principal locality affected was the city of Birmingham, Ala., and

Marine-Hospital Bureau was called upon to send an expert to ess a definite opinion as to the nature of the disease, doubt con- ng which had been expressed on account of the low rate of mor- r. An officer of the Service was therefore detailed for this purpose endered efficient aid to the authorities.

THE BUBONIC PLAGUE.

e prevalence of the bubonic plague in the Eastern Hemisphere offered a new problem for the consideration of the health authori- of the United States. The disease prevailed extensively in Bom- and its vicinity, and is reported as increasing at the present time rthern India. It has also appeared in certain portions of China Japan. Special quarantine regulations were issued with reference is disease, and a regular officer of the Marine-Hospital Service was led to visit the ports of Japan and China during the summer of for the purpose of obtaining and transmitting to the Bureau more ate knowledge concerning the health conditions of those ports and iability to contagion therefrom extending to the United States. rts of this officer, containing much valuable information, are pub- l. One vessel infected with the plague was received and properly ed at the United States quarantine station at San Francisco.

officer of the service was also detailed by the President as tech- delegate to the International Sanitary Conference, held in Venice ebruary and March, 1897, with special reference to preventive ures concerning this disease. Reports of the proceedings of this rence have been received and published.

LEPROSY.

full report has been made of the proceedings of the International osy Conference, held at Berlin, October 11 to 16, 1897, prepared . A. Surg. J. J. Kinyoun, detailed to attend the conference. Nine- countries were represented.

e report of the conference gives a somewhat imperfect statement e number of cases of leprosy in the different countries of the world, being approximately 130,000 in India; 20,000 in Japan; 2,500 in aii; 1,200 in Russia; 700 in Calcutta; 250 in the United States. nty-one other countries are included in the statistical table.

e cause of the disease is declared to be the bacillus leprae, and n to the scientific world for twenty-five years. It is now acknowl- d to be a slowly contagious disease, but not hereditary, and it is luded that isolation is the best means of preventing its spread.

e Surgeon-General calls attention to the fact that there is no suita- lace for the care of pauper lepers in the United States, and that as frequently been appealed to to care for occasional cases of lep- by State and local boards of health; and there is a desire on the of these authorities for the establishment of a national leper hos- . In view of the fact that our knowledge of the prevalence of the se in the United States is fragmentary and unsatisfactory, although positively known that the number is not inconsiderable, the Sur- General recommends (and in this recommendation I concur) that, eliminary to any further action in the matter, definite knowledge the prevalence and the sanitary measures adopted by State and icipal authorities be obtained through investigation by the Marine- ital Service; the result of the investigation to be made known to

Congress, with such recommendations as may be deemed prope cerning the establishment of a national leper sanitarium; and the sary expenses of the investigation to be made payable from the epi fund.

YELLOW FEVER.

Yellow fever has been unusually prevalent throughout the Isla Cuba during the past year. In the port of Habana alone, from Nove 1, 1896, to November 1, 1897, there were 1,605 deaths. Reckoned basis of mortality of 12 per cent, an extremely low percentage, deaths would represent about 12,000 cases. The disease has als vailed extensively in Santiago de Cuba, Matanzas, Cienfugas, and ports and places on the island. Attention is called to the cont menace to the United States caused by this disease in Cuba, an believed that after an investigation, which is now being made, i be shown that the recent epidemic of yellow fever in the South m traced to Cuba as its source.

Yellow fever has prevailed also during the past season extens throughout the West Indies and the Spanish Main, namely, in Jam Haiti, Guadaloupe, Isthmus of Panama, Nicaragua, San Salv United States of Colombia; also in Para and Rio de Janeiro, in B although there has been a marked diminution of the disease in the named city.

In view of the dangers apprehended at the beginning of the qu tine season, a circular was addressed to all consuls and consular a in the West Indies and on the Spanish Main, requesting full info tion to be given on the bills of health and supplemental bills of h furnished vessels leaving for the United States, and requesting prompt notification of the outbreak of infectious or contagious dise On account of the close proximity of Florida to the Island of Cuba, the danger caused by irregular tariff and illicit communication ca on by smugglers, two officers of the Marine-Hospital Service detailed for duty, one upon the east and the other upon the west co Florida, to inspect quarantine and inspection stations and to special precautions regarding the landing of smugglers or others unfrequented portions of the coast. These officers were assisted i performance of their duties by collectors of customs, officers o Revenue-Cutter Service, and by special agents of the Treasury De ment. Inspections were also made of all the quarantines of the S Atlantic and Gulf coasts.

THE RECENT EPIDEMIC OF YELLOW FEVER.

August 20, members of the state board of health of Louisiana vi Ocean Springs, Miss., to investigate the nature of a fever which been prevailing there some time, about 400 cases having been repo Under date of August 23 they declared the disease to be de September 4 Ocean Springs was visited by Passed Assistant Su Wasdin, of the Marine-Hospital Service, together with the state h officer of Alabama and the chairman of the city board of hea Mobile. Dr. Wasdin diagnosed the several cases which he examin yellow fever, the diagnosis being concurred in by several State and health authorities who took part in the examination. The disease thereafter appeared in New Orleans and Mobile, and several o smaller cities upon the Gulf coast and the southern half of the of Mississippi. Later in Montgomery, Selma, Flomaton, and se

minor places in the State of Alabama; in Galveston and Houston, Tex., and in Memphis, Tenn. The total number of cases officially reported to November 10 was 4,198, and the total number of deaths, 423.

The disease was widely prevalent in the city of New Orleans, the record being 1,722 cases, with 244 deaths, to November 10. So energetic were the measures taken in many of the places where the disease appeared that but few cases were developed and the mortality was light. The operations of the Marine-Hospital Service were conducted through experienced officers placed in charge of specified districts, who, in turn, employed medical and other assistants, and used all possible means to suppress and prevent the spread of the disease. Infected localities were isolated so far as possible; trains leaving infected districts were under medical supervision; mails, baggage, and freight were disinfected, and three detention camps were erected and conducted by the Service—one for Mobile, at Mount Vernon Barracks, Ala.; another for the Gulf coast, at Fontainebleau, Miss., and the third near Avondale, in Louisiana. In addition to the above, sanitary experts were employed to report upon suspected cases and to keep the Bureau informed. Also on the Mississippi River several inspecting stations were established for vessels going up the river from New Orleans, the vessels for this purpose being furnished chiefly from the Engineer Department of the Army, and the efforts to prevent infection of the Mississippi Valley were successful. The expert service of the Marine-Hospital Service was of great value in the prompt determination of the existence of the disease, giving an authoritative statement regarding the same, without which the necessary precautions would not have been taken by local authorities.

The Surgeon-General states that there is little doubt but that the work which was done had a marked effect in controlling the spread of the disease and preventing a much more extensive epidemic.

Ocean Springs, where the disease was first discovered, is not a seaport, and the point through which the disease entered the United States has not yet been determined, although the matter is under investigation.

At the date of this report the disease has almost entirely disappeared, and measures are being taken to carry out a system of post-epidemic disinfection of rooms and houses where the fever has prevailed.

EXPERT COMMISSION TO INVESTIGATE THE NATURE OF YELLOW FEVER.

Two skilled bacteriologists of the service, both of whom have had yellow fever, were detailed, in addition to other duties, to investigate the nature of the fever, and were engaged in laboratory work in New Orleans until the disease had practically disappeared there. By direction of the President, and the approval of the Secretary of the Treasury, these officers have been specially detailed to continue their investigations in the city of Havana, where the material necessary is available throughout the year. One of these officers has made a special study in the European laboratories of the most recent discoveries relating to the nature of yellow fever, and it is intended to retain this expert commission in Havana for a length of time necessary to obtain practical results.

SANITARY INSPECTION SERVICE.

During the year sanitary inspectors of the Marine-Hospital Service were maintained at Rio de Janeiro, Habana, Santiago de Cuba, Colon,

and Panama, and in Yokohama, Japan. In addition, as previously mentioned, a regular officer of the service inspected the ports of China and Japan.

NATIONAL QUARANTINE STATIONS.

The Surgeon-General reports that the eleven national quarantine stations have been efficiently conducted throughout the year, the reports from the medical officers in command showing great activity and efficiency in their administration. Infected vessels have been received at all of the stations, and their treatment has been conducted without undue detention. In the enforcement of the national quarantine law which requires local quarantines to comply with the Treasury regulations, inspections have been made of only the quarantines upon the Middle and South Atlantic and Gulf coasts. On account of the thorough inspection of the previous year, full reports of which were printed in the last annual report, it was deemed unnecessary to inspect the other stations.

In the enforcement of the national quarantine regulations deficiencies in the plant and inefficiency of administration of the local quarantines were developed at San Francisco, and in accordance with Section III of the act of Congress approved February 15, 1893, after careful presentation of the matter, the President took formal action by detailing P. A. Surg. M. J. Rosenau as quarantine officer at the port of San Francisco, with full powers as to quarantine measures.

At Sabine Pass, Tex., it was also found that the regulations of the Treasury Department were not being complied with, and it became necessary, in the enforcement of the same, to maintain an inspector at that station until near the close of the quarantine season.

During the year also an effort was made by the Mississippi State board of health to cause the removal of the national Gulf Quarantine Station at Ship Island, and the State board established a similar quarantine on an adjoining, namely, Cat Island, and endeavored to supplant the national quarantine. A plea was made by a representative of the board for the removal of Ship Island on account of its close proximity to the shore; yet, with remarkable inconsistency, the State board established a quarantine of precisely the same nature, but less efficient, on an island nearer the shore, and a studied effort was made to throw discredit upon the administration of the national quarantine. The station, as an inspecting station, was removed from Chandeleur Island to Ship Island in October, 1893, after the destruction of the station at Chandeleur Island by a tidal wave and storm which swept the hospital to sea and caused the death by drowning of five persons, one being a hospital steward, one a nurse, and three patients.

The Surgeon-General states that after examination by an experienced officer of the service, in conjunction with an officer of the Revenue-Cutter Service, it was found that no other site was available for a quarantine station for the coast of Mississippi, and in the appropriation act for 1895 Congress legalized the transfer from Chandeleur to Ship Island. Efforts have been made, by persistent statements contrary to the facts, to connect the recent epidemic of yellow fever with the station at Ship Island, but no facts have been presented throwing discredit on this station.

At eight other ports the service has maintained national quarantine inspections.

NATIONAL QUARANTINE LAW.

The Surgeon-General again refers to the necessity of a strictly national quarantine law, to which reference has been made in his two previous annual reports. In his report for 1896 he has shown the unequal benefits and at the same time the danger involved in the operations under the present quarantine law—that of February 15, 1893—which permits State and local quarantines to be conducted under their own rules and regulations, provided, in the opinion of the Secretary, additional rules and regulations are not required. The Surgeon-General argues that the national quarantine regulations should be made paramount. He states that under the provision of the law which requires him to aid in the execution and enforcement of State and local quarantine regulations claim has frequently been made by local authorities that this is the chief intent of the law, and that however absurd and unnecessary local quarantine regulations may be the Marine-Hospital Service is bound to aid in enforcing them. He recommends that the law of 1893 be amended so that its effect shall be to make the national quarantine regulations paramount, and to prevent interference with their enforcement by any State or local legislation.

This feature of the law should apply to both maritime and interstate quarantine. Its necessity with regard to maritime quarantine has been amply demonstrated, as shown in previous annual reports; and with regard to interstate quarantine its necessity has been very forcibly demonstrated within the past few months, during the recent outbreak of yellow fever in the South, when local quarantine authorities placed restrictions which not only paralyzed commerce but prevented the exercise of their full duties by the officers of the Government in their efforts to prevent the disease spreading from one section to another. The Surgeon-General has heretofore recommended that all maritime quarantine should be operated by the General Government. To purchase or to equip new quarantine establishments to supplant those of several of the large cities now in operation would require large appropriations, and it may be deemed impracticable to attempt this at the present time, but the law should be so framed that it will be within the province of the Secretary of the Treasury promptly to establish a quarantine station without regard to the State or local quarantine at whatever point and at any time that he may deem it necessary to the public safety for such action to be taken. A bill has been prepared and will be submitted amending the law in accordance with the above suggestions.

DIVISION OF SANITARY REPORTS AND STATISTICS.

In this division the public-health reports have been edited and issued weekly. These reports at the end of the calendar year are bound for permanent utility, making a volume of some 1,200 pages. They are mailed each week to all quarantine officers, to State and local health officers, and other sanitarians. They contain information relating to epidemic diseases in the United States and reports upon conditions affecting the public health. Statistical information is given concerning the prevalence of smallpox or yellow fever; concerning the arrival of immigrants at the several important ports of the United States; weekly reports are published from national quarantine stations, giving the history of every vessel treated at quarantine, this information being

of value to all quarantine officers. Weekly reports are also published from the State and local quarantine officers for the same purpose, and the request of the Bureau for these reports has been complied with by the several State and local authorities, with the exception of the local authorities in charge of the quarantine stations at New Orleans and New York. These latter have declined or failed to send the reports.

Each week there is published a mortality table for the cities of the United States, together with a table of temperature and rainfall for all the cities of the United States, furnished by the Agricultural Department.

The volume also contains sanitary, morbidity, and mortality reports received through the State Department from United States consuls at foreign ports and places, and the information contained therein is of great service to all quarantine officers in their zealous efforts to prevent the introduction of contagious diseases.

In this division also circular letters were prepared and transmitted to all cities and towns of the United States having a population, according to the United States Census of 1890, of 1,000 or more. These letters requested mortality statistics for the year 1896. One thousand one hundred and sixty-four cities and towns made reports, from which were prepared and published a table showing the total mortality for the year ended December 31, 1896, and the mortality rate per 1,000 of the population. The total number of deaths reported was 363,546 in a population, according to the United States census of 1890, of 18,498,482, this corresponding to an annual mortality rate of 15.93 per 1,000 of the population reporting.

In this division there is also a report showing the regulations which are in force or have been issued by the State boards of health, with a view to controlling the dissemination of pulmonary consumption.

HYGIENIC LABORATORY.

In the hygienic laboratory instruction has been given to officers of the Service and to representatives from State and municipal health boards. Investigations have been conducted concerning the use of formaldehyde gas as a disinfecting agent, and brought to a successful conclusion. This method of disinfection has been authorized by Department circular, and will prove valuable at the quarantine stations, since this gas is noninjurious to any fabrics, metals, or leather goods.

The proper method of disinfection of railway coaches is also the subject of a special article by the director of the laboratory.

Investigations have been made into the nature of malarial fever, the bubonic plague, the serum therapy of pneumonia, the diagnosis of enteric fever, and the cause and treatment of smallpox.

Bacteriological examination has also been made of the Potomac water, with a view to determining to what extent the water supply of Washington is responsible for the great number of typhoid cases prevailing annually, and to ascertain, if possible, how this condition can best be prevented.

The laboratory has also been utilized for the examination of sputum, blood, and pathological specimens sent from the several hospitals of the Service.

Analyses of well water have also been made on request of marine-hospital officers.

The Surgeon-General calls attention to the necessity of enlarging the laboratory and of providing a separate building for the same. I con-

cur in his recommendation that an appropriation of $25,000 be made for this purpose, and have included the same in the estimates for the fiscal year ending June 30, 1899.

I furthermore concur in the recommendation that a commission of medical officers of the Marine-Hospital Service be authorized by act of Congress to investigate the sources of pollution of streams and other water supplies of towns and cities where the pollution affects the people of more than one State.

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55TH CONGRESS, 2d Session. | SENATE. | DOCUMENT No. 211.

BACTERIOLOGICAL EXAMINATION OF THE POTOMAC RIVER.

LETTER

FROM

THE SECRETARY OF THE TREASURY,

TRANSMITTING,

IN RESPONSE TO RESOLUTION OF THE SENATE OF JANUARY 22, 1898, REPORT FROM THE DIRECTOR OF THE HYGIENIC LABORATORY OF THE MARINE-HOSPITAL SERVICE ON THE SUBJECT OF THE BACTERIOLOGICAL EXAMINATIONS OF THE POTOMAC RIVER, RELATIVE TO THE POLLUTION OF THE WATER SUPPLY OF THE CITY OF WASHINGTON.

MARCH 28, 1898.—Referred to the Committee on the District of Columbia and ordered to be printed.

TREASURY DEPARTMENT,
Washington, March 26, 1898.

SIR: In response to Senate resolution of January 22, 1898, I transmit herewith a letter from the Surgeon-General of the Marine Hospital-Service, inclosing the report of the director of the hygienic laboratory of the Marine-Hospital Service, conveying the results of bacteriological and other investigations relative to the pollution of the water supply of the city of Washington.

Respectfully, yours,

L. J. GAGE,
Secretary.

The PRESIDENT OF THE SENATE.

TREASURY DEPARTMENT,
OFFICE SUPERVISING SURGEON-GENERAL
MARINE-HOSPITAL SERVICE,
Washington, D. C., March 26, 1898.

SIR: In response to resolution of the Senate of January 22, directing that there be transmitted to the Senate any information which may be in the possession of the Marine-Hospital Service covering the results of bacteriological or other investigations relative to the pollution of the water supply of the city of Washington, I have to transmit herewith a report from the director of the hygienic laboratory of the Marine-

Hospital Service, which gives a full account of the investigations made by this Bureau relating to the subject of the Senate resolution.

Inclosed also are five charts further illustrating the subject.

I have the honor to remain, respectfully, yours,

WALTER WYMAN,
Supervising Surgeon-General Marine-Hospital Service.

The SECRETARY OF THE TREASURY.

TREASURY DEPARTMENT,
OFFICE SUPERVISING SURGEON-GENERAL
MARINE HOSPITAL-SERVICE,
Washington, D. C., March 21, 1898.

SIR: In response to your instructions to prepare a report on the subject of the bacteriological examinations of the Potomac River, I have the honor to submit the following synopsis of the investigations which have been conducted in the hygienic laboratory:

The inquiry was commenced as early as 1891, when a bacteriological study was made of the Potomac River water, for the purpose of classifying the bacterial flora.

During this examination a certain group of bacteria, known as the colon group, was observed, which persisted with some degree of regularity, although not in considerable numbers. This was especially noted in the months of the summer and fall.

In the following years investigations of the same character were made, in connection with other laboratory subjects, and with identical results.

It is now regretted that the inquiry then undertaken could not have been made continuous, thereby enabling us to reach positive conclusions earlier.

During the years 1892 and 1893, when cholera prevailed in Europe and this country was seriously threatened thereby, special attention was given to the subject of the pollution of water supplies, and that of Washington in particular. I was soon convinced that in the event of cholera gaining a foothold in this country, particularly east of the Allegheny Mountains, the water supply of Washington might be seriously threatened, if not infected with the germs of cholera, and that the possibility of having a repetition of the Hamburg epidemic was not remote. This fact was doubly emphasized in 1894, when an immigrant just landed was reported to have died of cholera in Cumberland, Md., just 125 miles above. Fortunately, the case was not cholera, but it demonstrated how easily a condition might arise under certain conditions which might jeopardize the water supply of Washington.

It is now a well-known fact that Washington has for many years enjoyed an unenviable notoriety in the number of cases of typhoid fever and diarrheal diseases which annually occur. This condition had at last become so persistent and grave that the medical profession had, by its long experience with the disease, become authorities on its treatment. On account of the gradual and persistent increase from year to year, the profession compelled action to be taken with regard to its cause and prevention.

Accordingly in 1894 the Medical Society of the District of Columbia appointed a committee to investigate and report on the cause and prevention of typhoid fever in the District of Columbia.

This committee, after an exhaustive and painstaking investigation, made its report to the society in June of that year, and subsequently presented it to the Congress and it was printed.

The conclusions were as follows:

1. The immediate abandonment of all wells within the city limits, exception only ›be made in case of the absence of the Potomac supply, and where the wells, after ›peated chemical and bacteriological examinations, have been found to be free from ll possible sources of danger; but even these to be abandoned as rapidly as possible.
2. Purification of the sewerage system already existing, by replacing as rapidly as ossible all damaged or defective drains.
3. The introduction of new sewers in advance of other improvements in parts f the city not now supplied with drainage, and the extension of the system as far utside of the city limits as the rapidly growing population demands, so as to pre-ent soil contamination.
4. The adoption of some system by which the lower sections of the city can be ıore completely drained and the risks arising from the backing up of tide water nd sewage prevented.
5. The final and safe disposal of the sewage.
6. To make all existing privies, vaults, or other receptacles of human excreta ater-tight, and by rigid inspection and penalties to prevent the danger from leak-ge and overflow.
7. The early completion of the plans recommended by Colonel Elliot, in charge of ıe Washington Aqueduct, and now in course of execution, which have in view the ›dimentation of the Potomac water and ultimately the completion of works for ltration, the only proper method of purification.
8. The suppression of all privies and the enforcing of the law to make sewer onnections.
9. Careful inspection of all dairies in the District from which our milk supply is rawn, and the enactment of a law by which no milk shall be sold in the District ithout a permit from the health office. The inspection should cover an examina-ion at the dairies of all possible sources of infection, including the water supply.

Special stress was laid on the box-privy system and of the shallow ırface wells as being responsible for the majority of the cases of typhoid ever and diarrheal diseases.

Aid was given to this committee in its investigations by making a bacteriological examination of water from several wells and springs which were suspected of being infected. The result of the examination showed that the suspicions were well founded, and the majority of these wells were found to contain the intestinal bacteria.

The following is the memorandum furnished the committee, which explains itself:

Sample number.	Location of well.	Result of examination.	Condition of water.	Recommendations.
1	East side of Seventh street between M and N streets NW.	Sewage bacteria; colon bacillus isolated.	Bad.....	Well should be closed.
2	L street between Sixth and Seventh NW.	.....do	.....do	Do.
3	East side Seventh street between M and N.	.....do	.....do	Do.
4	Tenth and S streets NW.	Sewage bacteria; fecal bacteria; colon bacillus isolated.	.....do	Do.
5	Sixteenth and Corcoran streets NW.	Ordinary forms usually found in water.	Good	Should be kept under observation.
6	Seventeenth and K streets NW.	Ordinary forms usually found in water, but in considerable quantities.	Suspicious	Do.
7	Tenth street between B and C NE.	Sewage bacteria; colon bacillus isolated.	Bad.....	Should be closed.
8	Third street and Indiana avenue NW.	Sewage bacteria	.....do	Do.
9	T and Eighteenth streets NW.	Ordinary water bacteria, but in large numbers.	Suspicious	Should be kept under observation.
10	Twenty-third and G streets NW.	Sewage bacteria	Bad.....	Should be closed.
11	Eighteenth and S streets NW.	Sewage bacteria in great numbers.	.....do	Do.
12	K street between Twenty-first and Twenty-second streets NW.	Sewage bacteria; colon bacillus isolated.	.....do	Do.
13	Ninth and H streets NW..	Ordinary water bacteria in small numbers.	Good	Should be kept under observation.

In view of the fact that deaths from malarial fevers are of rare occurrence in the cities of Philadelphia, Baltimore, and Norfolk—at least, this has been the experience of the officers of the Marine-Hospital Service stationed at these places—it is remarkable that Washington should prove the exception. It was suggested in this report that both the deaths from malarial fever and typhomalarial fever were nothing more or less than typhoid fever given another name. In the main, I believe that the conclusions were correct, and my own observation on cases of malarial and other fevers, made in a marine hospital (the majority of these having contracted the disease in the vicinity of Chesapeake Bay) was to the effect that deaths from malarial fevers were exceedingly rare, and that the disease known as typhomalarial fever was equally rare. In over 400 cases examined, I found 4 cases of a mixed infection of malaria and typhoid. Professor Osler reports that in 600 examinations of cases of fever none had been encountered, and that the so-called typhomalarial fever was nothing more than typhoid fever.

It then appears that all agree that these diseases are in all probability typhoid, and should be so classified. Another significant fact is that these cases occur synchronously with typhoid, and always in the same ratio. If, then, these cases are typhoid we would have a considerable increase in the death rate per 10,000, and instead of the death rate of 7 for the ten years ending January 1, 1897, it would really be 7.6.

Washington City stands among the foremost in the high death rate in a preventable disease.

In 1895 another serious and widespread epidemic of typhoid fever occurred during the summer and fall, and the disease was so severe that a special sanitary inspector, Dr. George U. Kober, was appointed to investigate into its cause.

At the commencement of this inquiry a request came from the health officer for the bacteriological examination to be made of samples of water submitted by Dr. Kober, in the hygenic laboratory, which request was complied with.

From September 24 to December 13 about 200 analyses were made of samples of water from about 70 different sources with the result of finding practically the same condition as existed in the wells examined the previous year. Dr. Kober concludes that the infected shallow surface wells located near leaky sewers and leaky privy vaults formed the ideal conditions for their infection and the dissemination of typhoid fever from them. Quite a number of these wells which were found to be badly contaminated were those which had been recommended to be closed and had been so for a time until by one pretext or another they were again reopened and used. Out of the 70 original sources (wells, springs, etc.) 26 were found to contain sewage bacteria and in 21 intestinal bacteria were found.

In my report submitted December 24, 1895, I state that—

> The Potomac River water has been examined, as will be seen, at intervals during the inquiry.
>
> While the examinations on the whole make a better showing than do the same number of wells, it was not found free from contamination.
>
> On two occasions intestinal bacteria were isolated, and in several instances the sewage bacteria were found.

The direct results of the investigation of both the medical society and Dr. Kober were the closing of many of the wells which were undoubtedly concerned in the spread of typhoid fever and diarrheal disease. This was particularly noticeable in localities where the people had depended solely on these wells for their supply; there was a noticeable

diminution in the number of cases after a new supply of water had been introduced. Unfortunately, this did not cure the evil; typhoid fever, while diminished in these localities, had not disappeared, but still lingered. Not only this, the closure of the wells and the abatement of nuisances did not diminish, or has not materially diminished, the death rate of typhoid fever. The disease now appears to be widely scattered, and there are no particular foci as have heretofore existed.

The previous investigations have not been without their indirect benefits. The Potomac water has been heretofore considered by many to be in as good condition as any other water supply, and the idea prevails that, on account of the large quantity of water and the proportionately small quantity of sewage thrown into the river, long before it reaches Washington it has been purified by the efficient agencies of aeration and sedimentation.

Other causes have been assigned for the prevalence of typhoid fever, such as milk, imperfect sewerage, and pollution of the subsoil.

While these theories offer a plausible explanation for these conditions, it by no means follows that they are true; but when people are misled into this way of thinking it takes a long time to convince them of the error—ten times longer than they were falling into it.

Such a mass of evidence had been collected that it was thought sufficient to convince almost anyone that the public water supply was contaminated, and would in time become more so, as the history of the Potomac River was the repetition of that of other rivers which are used for like purposes; and further, that no chemical or bacteriological examinations should be necessary to prove the condition. Such, however, is not the case.

In order to settle this question once and for time to come, another examination of the Potomac River water was commenced on July 1, last. These examinations were intended to serve a double purpose, one to determine the biology of the Potomac water, and the other to serve as preliminary to a proposed investigation concerning the pollution of the water supplies, where the sanitary condition of one or more States was threatened or involved.

It was intended to collect the data of at least a year before publishing the final results, yet it is believed that the inquiry has been sufficiently far advanced to furnish conclusions of value.

This investigation has been assigned to my colleague, Passed Assistant Surgeon Sprague, who submits the following report:

HYGIENIC LABORATORY,
Washington, D. C., March 10, 1898.

SIR: I have the honor to submit for your consideration the following report of the bacteriological examination of Potomac River water from July 1, 1897, to February 28, 1898, inclusive.

In order that sufficient data might be obtained from which to draw reliable conclusions, it was determined to make semiweekly bacteriological analyses of our drinking water for a period of at least one year. Realizing the necessity of certain fixed factors in our work, upon which would depend the value of comparisons to be drawn, preparations were made to secure the desired uniformity. Accordingly, sufficient media was prepared in June, 1897, to last through the entire year. Using, as we have, for each examination, the same culture material for the bacteria, any sudden variation in the biological character of the water can in no instance be attributed to the employment of different media. There must also be a common source from which to obtain the water, and it should represent as nearly as possible the water which flows in our mains.

In the basement of the Marine Hospital Bureau building, in which the hygienic laboratory is located, is a tap which is kept constantly running in the operation of a vacuum apparatus, and from this source all of our samples have been collected. It is evident that these samples must very accurately represent the condition of Potomac water as it flows in the city pipes. The temperature has been taken with a centigrade

thermometer, graduated to tenths of one degree, and a note made of the clearness or turbidity. The water was always collected in a sterile graduate, provided with a sterile paper cover, and thus conveyed to the laboratory. By means of a sterile pipette 5 cubic centimeters of the water was introduced into each of four fermentation tubes, two of which contained 1 per cent lactose-peptone bouillon, while the other two contained 1 per cent dextose-peptone bouillon. The duplicate tubes were used for purposes of control as well as to furnish a broader basis upon which to conduct further research for the colon group of organism and other sewage bacteria.

The fermentation tubes were then placed in a special incubator kept at a constant temperature of 39.5° C., and allowed to remain undisturbed for a period of forty-eight hours. At the same time 1 cubic centimeter of the water was introduced into a flask containing 99 cubic centimeters of freshly sterilized distilled water. The flask was then agitated sufficiently to make an even mixture, and 1 cubic centimeter was placed in each of six Petri dishes. Into the Petri dishes was then poured a tube of 6 per cent glycerine agar, which was thoroughly mixed with the 1 cubic centimeter of diluted Potomac water. Three of these plates were allowed to develop for forty-eight hours in the dark at room temperature, which varied from 25° C. to 30° C. The remaining three were placed in a Novy jar, and by repeated exhaustion of the air and by the introduction of hydrogen a pure atmosphere of the latter gas was obtained. These plates were then allowed to develop under the same conditions of temperature, darkness, and time as the first three.

At the expiration of forty-eight hours the colonies were counted and an average taken which, multiplied by 100, gave the number of organisms in 1 cubic centimeter of undiluted Potomac water. To those grown in the atmospheric air the name aërobes is given, and to those grown in hydrogen anaërobes. At the same time that the colonies were counted the fermentation tubes were examined and the amount of gas, if any, in the arm of the tube was recorded in inches. A hanging drop from each of the tubes was next examined for motile bacilli. If there was no fermentation and no motile organisms present, the tube was destroyed and no further examination made; but if motility, with or without fermentation, was present that tube was considered suspicious, and the examination of all such was continued for the purpose of detecting intestinal or sewage organisms. It may here be noted that the typhoid bacillus and the majority of the colon bacilli possess the power of moving more or less rapidly through a liquid medium in which they may be suspended. Hence the necessity of further study of any bacillus possessing that character.

In order to identify the sewage organisms it is necessary to separate them from the numerous harmless bacteria constantly present in water and from which they can not always be distinguished by their morphology. To secure this separation a small loop of the suspicious culture was transplanted into a specially prepared medium known as Elsner's, from the name of the bacteriologist who first made use of it. Without going into the precise method of preparation, it suffices to say that it is an iodized potato gelatine so standardized as to alkalinity that it corresponds exactly in its reaction to a chemically pure solution of calcium hydrate. This particular method of standardizing this medium is a modification of the method originally employed, suggested by Grimbert, and it has been found to give most excellent results. The peculiarity of this medium is that the growth of bacteria other than the bacillus of typhoid fever, the colon bacilli, and sewage organisms is either entirely inhibited or so limited that the intestinal and sewage bacteria, if present, are readily isolated.

In passing, it may not be amiss to state that very recently Professor Roux, of the Pasteur Institute of Paris, was heard to say that, in his opinion, Elsner's method was the best yet devised for isolating fecal bacteria. Every batch of Elsner prepared was tested with a pure culture of typhoid and colon to prove that they would grow thereon if present. Inasmuch as gelatine was the substance employed to produce solidity, it became necessary to keep the Elsner plates in a cool chamber, the temperature of which was kept at or below 20° C. The low temperature interfered to some extent with the rapidity of development of the bacteria, and for this reason the plates were retained for a period varying from five to seven days. No growth occurring at the end of that time, further investigation was abandoned; but in case of a growth appearing it was examined more fully for the purpose of ascertaining its character. If the growth was found to be a bacillus, it was at once transferred to several different media in order to learn its behavior and to enable it to be classified.

A bacillus obtained from a colony on an Elsner plate, after going through the stages previously described, was studied as to the following points: Did it possess motility? Did it ferment lactose and dextrose peptone bouillon? Did it produce indol after forty-eight hours' growth, at a temperature of 37° C., in Dunham's peptone solution? Did it liquefy gelatine? Did it acidify or coagulate litmus milk, and how long a time was required for any change in this medium? What was the nature of its growth on potato? How did it stain by Gram's method? According to the answers obtained to the foregoing questions was based our determination of the

ıame of the bacillus. While, as can be seen from the above, every effort was made ;o find the typhoid bacillus, it must be acknowledged that up to the present time t has not been isolated from Potomac water; but the colon bacilli which very ılosely resemble the typhoid, and are always found in connection with the last-ıamed germ, were isolated on numerous occasions, as will presently be shown.

In addition to the 70 examinations of water taken directly from the tap, 55 samples vere furnished the hygienic laboratory by courtesy of the Geological Survey. They vere taken at Westernport, on the north branch of the Potomac; at Romney, on the outh branch; at Port Republic, on the Shenandoah, and at all the principal inter-'ening towns down to Point of Rocks. It will thus be seen that the condition of he entire river and its tributaries was thoroughly investigated. These samples were ollected under strict asceptic precautions, were promptly forwarded to the labora-ory, and no unnecessary delay occurred in beginning the bacteriological analysis. t has been claimed by some investigators that a bacteriological analysis of water, nade some hours or days after its collection, was worthless, because of the death of he organisms which would occur in the time of the interval between the time of ollection and the beginning of the analysis.

For the reason that some slight changes, either by death or growth of the organ-ıms, probably would occur in twenty-four or forty-eight hours, no count of the ıacteria was made from these samples, but anyone familiar with the bacteriological ınalysis of water, observing the behavior of many of these samples, would have aid that if time had destroyed any of the bacteria present in the fresh sample, he vould want ages to elapse before drinking the same. There were positive indica-ions that some of the samples were literally teeming with bacteria; and the chart f the river showing the points at which the samples were collected, and the points vhere the colon bacilli were found, will show that in nearly every instance where ewage contamination could be expected it was present. For the reason above tated, the examination of these samples was limited to the search for sewage ıacteria.

Reference to the accompanying chart, No. III, will show the places at which sam-ples were collected marked with a circle, and those places at which the colon bacilli were found are marked with red. Briefly, colon bacilli were found in thirty ınstances, and sewage bacteria were found in six others.

Number of bacteria found in Potomac water at each examination.

Date.	Aërobic bacteria found in 1 cubic centimeter.	Anaërobic bacteria in 1 cubic centimeter.	Date.	Aërobic bacteria found in 1 cubic centimeter.	Anaërobic bacteria in 1 cubic centimeter.
1897.			1897.		
July 1	650	Count not made.	Nov. 1	17	50
6	400	100	4	167	33
9	4,600	2,800	8	733	117
12	366	33	11	183	133
15	33	66	15	250	83
19	266	400	18	317	117
22	200	66	22	100	83
26	166	66	25	466	216
29	†150	†100	28	833	1,000
31	466	116	Dec. 2	2,267	1,200
Aug. 2	316	100	6	4,300	300
5	183	66	9	900	600
9	216	116	13	700	533
12	133	83	16	1,200	366
16	300	33	20	933	433
19	100	200	23	1,200	300
22	283	433	27	367	Count not made.
26	250	66	30	283	Do.
30	166	300	1898.		
Sept. 2	366	133	Jan. 3	No growth.	67
6	116	116	6	533	100
9	2,200	1,200	10	567	167
13	150	200	13	500	200
16	50	500	17	566	66
22	150	16	20	467	233
27	150	100	24	700	400
30	200	0	27	733	167
Oct. 4	16	50	31	433	566
7	33	33	Feb. 3	400	400
11	116	83	7	633	66
14	83	50	10	167	87
18	216	100	14	166	200
21	83	50	17	333	33
25	33	50	21	333	66
28	167	50	24	1,133	166
			28	1,000	533

Percentage of times colon bacilli were found in Potomac water.

	Per ce exam tio pres
1897.	
July	
August	
September	
October	
November	
December	
1898.	
January	
February	

I will state that the data from which the temperature and turbidity curve (Cl No. II) were prepared were kindly furnished by Capt. D. D. Gaillard, Corps of E neers, U. S. A., in charge of Washington Aqueduct. While the temperature and bidity were recorded daily, for schematic purposes, averages were made for the halves of each month, but it is thought that the deviation from the absolutely curve is not sufficient to lead to erroneous conclusions.

The turbidity appears to correspond fairly accurately with the number of bacte and this is what would be expected, because increased muddiness can only c from a rain which washes in more organisms. While great stress has been laid some upon the clearness of a water supply, and none will gainsay its desirabilit is a fact that when the Potomac water is clearest, as it was last year during tember and October, then it was in reality the most dangerous to drink, becaus shown above, it contained relatively more pathogenic bacteria than when it turbid. It is not far from the truth to say that the clearer the Potomac the suspicious of it should we be.

Attention is called to the parallelism existing between the death rate from typl fever, the percentage of times colon was found, the fermentation and the tem ature curve; but at the same time that the above were high the number of organi per cubic centimeter was low. That during the heated season the bacteria shoul few is natural and easy of explanation: The anaërobic bacteria are at this present in much greater numbers in proportion to the aërobic than at any other son of the year. Now, inasmuch as the anaërobes indicate with a fair degre accuracy the amount of sewage contamination, it is evident that from Augus November the Potomac River is more dangerously polluted than at any other se of the year. That there should be this relatively increased number of sew organisms is equally as readily explained as that the total number of bacteria sh be low. During the late summer and early autumn there is a low rainfall, co quently few organisms are washed into the river from the surface of the earth, source of by far the greater part of the bacteria present in water.

During this season, however, the quantity of house sewage is appreciably ab the yearly average, and it is from this source that the bacteria must come; hence have a relative increase of dangerous bacteria, and a diminution of the nonpa genic varieties. At first glance it would appear that the highest typhoid death with the fewest organisms was contradictory, but when all the circumstances taken into consideration it is at once seen that so far from being a contradictory s of affairs, it is exactly what is to be expected. That the typhoid death rate, presence of colon bacilli, the fermentation changes in the media, and the temp ture should coincide with one another is perfectly logical, and there is but one clusion that can be drawn therefrom: The increased mortality from typhoid diarrheal diseases is due to the increase in the quantity of bacteria from the in tines of man, which our citizens are compelled to ingest at that time. The ca relation between the impure drinking water and this death rate is so evident tha my mind it is almost a criminal negligence to allow such an easily preventable dition of affairs to longer obtain in our midst; and it can be truthfully said just so long as the inhabitants of this District are compelled to use Potomac w in its present state of pollution, from 200 to 250 lives will be needlessly sacrifi annually.

Respectfully, yours,

E. K. SPRAGUE,
Passed Assistant Surgeon, Marine-Hospital Servic

P. A. Surgeon J. J. KINYOUN,
Director Hygienic Laboratory,
United States Marine-Hospital Service, Washington, D. C.

APPENDIX.

es and dates at which samples were collected by representatives of the United States Geological Survey, with the results of examination.

Places.	Date.	Bacteria.
	1897.	
ng Creek, 1 mile above its mouth	Sept. 26	Colon bacilli.
m-Mile Creek, 300 yards above Chesapeake and Ohio Canal crossing	July 26	
Creek, 200 yards above Chesapeake and Ohio Canal crossing	Sept. 25	Colon bacilli.
ts Creek, 300 yards above Baltimore and Ohio Railroad crossing	....do ...	Colon bacilli.
es Creek, Washington street, Westernport	Sept. 27	
)	....do ...	
e River, Piedmont Water Works intake	....do ...	Sewage bacteria.
ac River. 150 yards above junction with Savage River	....do ...	
ac River, at bridge below Piedmont pulp mill	Sept. 28	Colon bacilli.
sons Creek, near mouth	Sept. 29	Colon bacilli.
un, South Branch Potomac, mile below Romney	Sept. 27	Colon bacilli.
Branch Potomac, above mouth of Big Run	..do ...	Colon bacilli.
Creek, 200 yards above confluence North Branch Potomac	Sept. 29	Colon bacilli.
Creek, above glass works, three-fourths mile above Cumberland	Sept. 28	Colon bacilli.
Capapon Creek, one-half mile above mouth	Sept. 29	Colon bacilli.
Capapon River, one-half mile above Baltimore and Ohio Railroad ge, Great Capapon Station, W. Va.	....do ...	Colon bacilli.
. United States Leather Company Tannery, Pawpaw, W. Va	....do ...	Sewage bacteria.
r Creek, near Baltimore and Ohio bridge, 1 mile above Sleepy Creek ion.	Oct. 1	Colon bacilli.
arge from Berkeley Springs sewage pool into Warm Spring River, t Virginia.	Sept. 30	Colon bacilli.
Spring Run, below Baltimore and Ohio station, Hancock, W. Va	....do ...	Colon bacilli.
oway Creek, 1 mile below Hancock, W. Va	Oct. 1	
Fork of Shenandoah River, Riverton, W. Va., 1 mile above confluence	Oct. 3	Colon bacilli.
ocheague Creek, Williamsport, Md	Oct. 2	Colon bacilli.
g Creek, near mouth, 8 miles below Hancock	Oct. 1	Colon bacilli.
Fork Shenandoah, Riverton, W. Va	Oct. 3	Colon bacilli.
Creek. 3 miles above North Mountain, West Virginia	Oct. 7	Colon bacilli.
pring River, mouth	....do ...	Sewage bacteria.
Conococheague Creek, near mouth, Maryland	....do ...	Colon bacilli.
ion Creek, West Virginia, near mouth into Potomac River	....do ...	
end drain, Hagerstown, Md., where it enters Marsh Run	Oct. 9	Sewage bacteria.
drain, where it enters Marsh Run, Hagerstown, Md	....do ...	Sewage bacteria.
Tonoloway, Hancock, Md	Oct. 11	Colon bacilli.
Creek, three-fourths mile above confluence with North Fork Shenoah.	Oct. 12	
eam Creek, near mouth	....do ...	Colon bacilli.
ll Creek, near mouth into Monocacy, drainage of Frederick, Md	Oct. 14	Colon bacilli.
ac River, Point of Rocks	....do ...	Colon bacilli.
n Creek, 1 mile above mouth	Oct. 15	Colon bacilli.
Creek, 1 mile above mouth	Oct. 14	Colon bacilli.
tin Creek, Maryland	.....	Colon bacilli.
tin Creek, Virginia, one-half mile from mouth	Oct. 14	Sewage bacteria.
cacy Creek, Maryland, one-fourth mile from mouth	....do ...	
speake and Ohio Canal, at Great Falls	Oct. 15	
ndoah River, at junction with Potomac, Harpers Ferry side	Oct. 25	
ndoah River, at junction Potomac, opposite Harpers Ferry	Oct. 27	
Creek, under Baltimore Street Bridge, Cumberland, Md	Oct. 26	Colon bacilli.
Creek, above glass works, Cumberland, Md	....do ...	Sewage bacteria.
nac water, above Johnston Street Bridge, Cumberland, Md	....do ...	Colon bacilli.
speake and Ohio Canal, five-eighths mile below Cumberland, Md	....do ...	
kesbill Creek, one-half mile above mouth, Page County, Va	Oct. 27	Colon bacilli.
ge River, one-half mile above junction with North Branch Potomac	....do ...	Colon bacilli.
nac River, one-eighth mile above junction with Savage River	....do ...	Colon bacilli.
ing Run, Millville, W. Va., near mouth, polluted by straw	Oct. 25	
le River, south fork of Shenandoah, Mount Meriden, Va	Nov. 9	
River, south fork of Shenandoah, mouth, near Port Republic, Va	Nov. 7	
h River, south fork Shenandoah, Rockland Mills, near Weyer Cave, Va	Nov. 8	

The latter inquiry was more particularly directed to the detection and isolation of two groups of bacteria—the colon and sewage groups—than to the general biology of the Potomac River water, because of the relation that these bacteria bear to disease.

The colon bacillus taken in connection with others of this group has been regarded as an index of water pollution, and while these are not considered as the specific causes of disease, they are always found associated with those that are. So far as known, the typhoid bacillus has been isolated only twice from drinking water, notwithstanding the fact that this one bacillus has been sought for more than all others combined. Various explanations have been given as to why this bacillus can not be detected and isolated, even from water which is positively known to contain it; yet none are fully satisfactory. The most plausible theory is that the other bacteria are so numerous as to obscure it. This seems to be the case in isolating the typhoid bacillus from dejecta. The colon bacilli and other intestinal bacteria are so numerous that the typhoid bacillus is recognized with great difficulty. If this, then, be the case, one can readily imagine the difficulties in the way of success in isolating the typhoid bacillus from water where the sewage is greatly diluted and the bacterial flora is so varied and numerous. Dr. Dunham has shown that many of the bacteria found in sewage possess the power of living and multiplying in an atmosphere devoid of oxygen; also that this method is very valuable in detecting sewage contamination when it would be extremely difficult to do so by other means. Dr. Sprague has employed this method in his investigations and found it highly satisfactory. This method is valuable in detecting the presence of sewage in infinitesimal quantities, and is far more delicate than chemical methods. Of course, the detection of the biological factors in sewage is meant, and not chemical compounds.

Chart No. I of Dr. Sprague's report shows the relative quantity of sewage pollution found. Dr. Theobald Smith was first to make a quantitative determination of the bacteria in the Potomac water. The results of his inquiry may be seen in the accompanying chart No. B. By comparing this chart with the one submitted by Dr. Sprague it will be seen that there is a considerable variance in the results. Especially is it so with reference to the relation the number of bacteria bear to the presence of typhoid fever. This difference is thought to be due to the changed conditions which have taken place in the past twelve years. My own observations during the past four years more nearly coincide with those of Dr. Sprague than with those of Dr. Smith.

The most striking feature is the number of times the colon bacillus was detected and the relation it bears to the monthly death rate of typhoid fever. It is an established fact that during the summer time the number of bacteria is diminished by certain agencies which will be spoken of later. It has been found that there is a relative increase in the number of intestinal and sewage bacteria during this time. This fact alone, it is believed, will go far in establishing the connection between typhoid fever and this group of bacteria.

There is a wide difference of opinion concerning the viability of bacteria in water. Some claim that they will not develop in water unless it is very rich in nutrient material, and then only under the most favorable conditions, while there are others who cite instances where the bacteria material increases under the ordinary conditions, especially those of the intestinal group.

; is also a well-recognized fact that temperature plays an important in the development of bacteria, and we would expect a large increase heir number during the summer and fall. Practically this does not ır.

'ater containing sewage will preserve bacteria for a considerable :th of time, especially if the temperature is low. The bacteria in ɜr may be diminished by the germicidal action of strong sunlight, :cially if the water is clear and still; yet under the most favorable litions the sunlight affects only the under stratum, and has scarcely effect upon those a foot or so below the surface.

ıere is little or no effect if the water is turbid or moving rapidly. requires a long time for bacteria to be affected by aeration. They diminish under its influence if it is persistent, but not otherwise. inference drawn from the oxidation of the bacterial and chemical ucts does not apply to the bacteria. The number of bacteria in Niagara River are but slightly diminished in their plunge over the and subsequent aeration in the stream below. Perhaps the stream ɔt long enough to test this thoroughly, but I am of the opinion there are no rivers in this country sufficiently long to accomplish purpose.

ıere is no doubt but that sedimentation accomplishes considerable minishing the number of bacteria. Sedimentation of bacteria is e another thing from the deposition of suspended matter. A stream free itself from turbidity and yet contain a large number of bacte- Sedimentation of bacteria may, and often does, occur as the result me and the distance the water is carried. The slower the volume ater is moved the more rapid will be the deposition. It remains to lemonstrated whether any sedimentation occurs in the Potomac ır above Washington. If we take the turbidity as an index the mentation must be slight. So far the number of observations have been sufficient to settle this question.

series of observations were recently made of the water in the receiv- reservoir, which is located a short distance above the city. These rvations were to determine the number of bacteria at different ıhs in the reservoir. The following are the results:

Station.	Location.	Sample.	Bacteria to 1 cubic centimeter.
n 1	Southwest corner of Reservoir I.	1. Water from surface	2,800
		2. At 1½ meters	1,070
		3. Within 1 foot of bottom, at 3½ meters.	330
n 2	At influent gate, Reservoir No. 1.	1. Water from surface	330
		2. At 2 meters depth	267
		3. At bottom, 3½ meters	193
n 3	At central gate house	1. Water from surface	1,067
		2. From bottom, 3½ meters	633
n 4	Southwest corner of Reservoir No. 2.	1. One foot below surface	1,200
		2. At bottom, 3½ meters	567
n 5	Effluent gate, Reservoir No. 2.	1. One foot below surface	600
		2. At bottom, 3½ meters	833

am informed that the reservoir contains 150,850,000 gallons, which three days' supply for the city.

was contrary to expectation to find the number of bacteria greater he surface than at points below. This is explained by the rapid

current of the water passing from one reservoir into the other and ou at the gate, thereby practically making a stream through the reservoir The water evidently flows in the line of least resistance, and this i found at the surface. Consequently, the bulk of water passes throug the reservoir in a surface current and allows the under stratum todeposi its bacteria. It also points to the fact that sedimentation does occur but to a slight degree, especially so in those localities where the cur rent is slackened or absent. It is not believed that the short time o three days would be sufficient to influence materially the number o bacteria.

Observations which were conducted with the London water suppl during 1896, show that it requires at least ten days' storage before sedi mentation diminishes the number of bacteria, and if the water wa allowed to remain in storage for a month or more the sedimentatio was more complete.

The same conditions will apply to the public water supply. I an unable to state whether the Delecarlia and receiving reservoirs ar of sufficient size to permit the storage of water for this length o time.

There is an intimate relation existing between the number of bacteri present in a water supply and disease. Rivers or other sources of wate supply which contain a large number of bacteria are responsible for th large number of diarrheal disorders. So if the number of bacteria is hig and constant a water should always be looked upon with suspicion. A sudden rise in the number of bacteria in the Potomac water may not be o great importance, but the persistence of this large number is always t be regarded with suspicion. It is to be expected that a water suppl receiving large quantities of decomposing organic matter—sewage, i other words—has associated with it a great number of bacteria. Ther is always a relative increase in the number of bacteria in rive water during winter. This is due to two causes: first, increase washings from the soil, and, second, the preservative action of lo temperatures.

It will be observed that during these months the typhoid-fever deat rate is at its minimum, notwithstanding the increased number of micro organisms. At first sight one might conclude that this would be contradiction of the foregoing statement. The increase in the numbe of bacteria is synchronous with the increased volume, notably just afte rains or during the winter months when the precipitation is the heav iest. It would be natural to infer that if the number of bacteria wer indicative of contamination there should be an increase in the numbe of diarrheal diseases. Yet this is not the rule. There are, however exceptions. During the summer months there is an occasional heav rain, which carries the sewage from the watershed to the river, an this rain is not sufficient to materially augment the body of water i the river. In this way it is probable that large quantities of concen trated sewage may suddenly be thrown into the water and do grea harm. In the summer time the stream and tributaries receive a give quantity of sewage daily, the water becoming less in volume, thereb increasing the number of sewage bacteria many times over the numbe that are found in winter.

While there is a relative increase in the number of bacteria durin the winter months, there is also an increase in the volume of water thereby dissipating in a measure the danger. This, I believe, is th

explanation of why there is an increase in the number of cases of typhoid fever in the summer time over those of the winter. Now, if the river water would purify itself by means of aeration, light, and sedimentation, it should occur through the summer months, when the conditions are most favorable. We would expect a gradual diminution of sewage and colon groups of bacteria, and especially those contained in the Potomac River. The larger proportion of contamination of Potomac River occurs at and above Cumberland, Md. The tributary streams below this point do not add much to the contamination.

Mr. Newell, of the Geological Survey, states in his report that if we could dam off the stream below Cumberland, the greater part of the pollution would be removed. Now, if the river would purify itself by aeration and sedimentation, it would be natural to suppose that the pollution would become less and less as we approach Washington. On the contrary, Dr. Sprague reports that the samples of water taken at various places in the Potomac basin do not show a diminution of the colon group, but a relative increase as we approach Washington. This fact alone would appear to be sufficient to demonstrate the fallacy of self-purification of a stream. There is evidently more than a coincidence between the presence of the colon group of bacteria and the number of cases of typhoid fever. Chart A has been prepared to show this relation.

By reference to this chart it will be seen that the upper line represents the total death rate, by months, from typhoid and typhomalarial fevers for the eleven years ending March 1, 1898. The second line represents the number of deaths from typhoid fever during this period, and the lower line the number of deaths from typhoid fever in the year 1897–98, ending March 1. There is no doubt that the deaths reported as typhomalarial are nothing more or less than typhoid, as the increase of deaths from this disease is synchronous with those of typhoid. By comparing these mortality curves with those prepared by Dr. Sprague in chart No. 1, it will be seen that there is a coincidence between these and the curve of the intestinal bacteria. The same relation between this group of bacteria and the prevalence of typhoid fever has been shown in cities other than Washington, as, for instance, Hamburg. Typhoid fever was endemic, prevailing in epidemic form in the summer and fall months. The bacteriological analysis of the drinking water demonstrated that the increased number of intestinal bacteria always coincided with the increased prevalence of typhoid fever and diarrheal diseases. This condition prevailed year after year until the water was filtered. Since then there have been no such coincidences.

We have still more evidences of the pollution of the Potomac River. Dr. Kober reports that in 1890 an epidemic of typhoid fever occurred in Cumberland, Md., and three weeks later there was an increase in the number of cases in Washington. If we allow from three to five days for a given volume of water to travel from Cumberland, Md., to Washington, and from fourteen to eighteen days for the period of incubation for typhoid fever, it would coincide with the increase in the number of cases.

The principal causes of pollution from sewage are derived from the towns and villages located in the Potomac Basin. There are about 35 of these located on the Potomac and its tributaries, which have in

the aggregate a population of about 75,000, and are distributed follows:

Name.	Population.	Name.	Po th
Petersburg, W. Va	400	Piedmont	
Moorfield, W. Va	500	Keyser	
Remney	900	Luke	
Pawpaw	200	Lonaconing	
Berkeley Springs	1,000	Frostburg	
Martinsburg, W. Va	500	Charlestown	
Williamsport	1,500	Front Royal	
Hagerstown	15,000	Riverton	
Frederick	10,000	Berryville	
Cumberland	15,000	Millville	
Dobbin	600	Toms Creek	
Hamilton	600	Harrisonburg	
Gormania	600	Staunton	
Elk Garden	1,800	Harpers Ferry	
Westernport	2,000		

Typhoid fever has been reported to prevail in Cumberland, Staun Harpers Ferry, Elk Garden, Westernport, Frederick, and Hagersto

The conclusion to be drawn from the above statements is that Potomac is polluted with sewage to such an extent that it is a const menace to the health of the inhabitants of the District of Colum This is not a new statement, but is made only to emphasize wha already well known.

REMEDY.

Several ways may be considered for purifying the water:

First. The control of the watershed.

Second. Seeking a new supply.

Third. Improvement of the present supply.

According to the report of the hydrographer of the Geological S vey, the drainage basin of the Potomac River has an area of o 11,000 square miles, which lies in four States—Pennsylvania, Maryla West Virginia, and Virginia. It would be next to impossible to c trol this vast area, or abate the nuisances thereon without practic depopulating it. It need not be considered further.

A new supply must either be taken from a watershed capabl yielding an adequate quantity of water, or obtain it from artesian w There is no watershed near Washington which would furnish the w supply which is not open to the same objections as apply to the Poto Basin. Even if it were possible to procure a new supply, the expe of purchase and that incident to policing would be far in excess of expense connected with any proposition heretofore advanced for purification of the present water supply. Artesian wells would owing to the geological formation of the District, be practicable.

Filtration.—Filtration of water is accomplished in one of two w the rapid method of mechanical processes, or by the slow method sand filtration.

The mechanical method, while it removes the suspended matter f a water, performs the function of removing bacteria in a variable n ner, depending on the character of the appliance, the method of o ating, and the water to be filtered. The removal of the bacteria is w should be defined as filtration, and a filter which removes the bact successfully will remove the suspended matter; but filters may rem

the suspended matters and fail to reduce the number of bacteria. This is usually what the mechanical filters do. Mechanical filtration would not be successful in removing the bacteria from the Potomac water on account of the large quantity of suspended matter.

Household filtration has its advocates. The filtering apparatus best adapted for household purposes are those made of unglazed porcelain or infusorial earth, such as the Pasteur-Chamberland or the Berkfeld. These filters, if perfect (and very few of them are), will efficiently filter water for a short time only. They require a great deal of care and attention, and must be cleansed at frequent intervals, for if not, they become a greater menace than the raw water. They are also quite expensive and out of reach of the masses, those who require them most. You may enjoin and plead for people to boil their drinking water but they will not do it unless threatened with a visitation of cholera, and then only at starts and intervals, it being proportional to the degree of their fright. My opinion is that if you desire people to use boiled water you must boil it for them.

Sand filtration is the most practical solution; in fact, it seems to be the only way in which a large quantity of water can be purified and rendered potable.

It was on account of the high death rate from typhoid fever that this system of water filtration was adopted and perfected by the European cities. Since its use the death rate from typhoid and other diseases has fallen to a very low rate. In view of the good results accomplished by their use of it, it is remarkable that no more than four of our American cities have adopted this system, and particularly Washington.

It is hardly within the province of this report to deal with the construction and method of operating sand filter beds, as this is for engineers to consider.

The description of these filter beds has been promulgated now for several years, and is common property. Anyone can inform himself of the details of construction and operation if he care to manifest a sufficient interest. A proposition has been advocated to send a commission to Europe to study this system of water purification, and to report on its adaptability for the water supply of Washington. While such a commission may by personal inspection gather facts concerning the best method of constructing and operating European filters, little that is new will be added to our present knowledge.

Three cities of the United States have already followed the example of Lawrence, Mass., and have filter beds in successful operation. All these cities are within twelve hours' travel of Washington.

I can not agree that the situation is not serious, or that it can admit of further delay, by reason of the fact that the death rate from water-borne diseases has shown no material increase within the past three or four years. The best that can be said is, it is bad; we have a remedy, and the sooner it is applied the more lives will be saved—lives which are being sacrificed by delays or negligence, which should be characterized by no less a term than criminal.

During the past eleven years ending March 1, 1898, there have been 2,150 deaths reported from typhoid and typhomalarial fevers, not including those from diarrheal diseases, of which at least one-half are directly due to polluted water. If during this time a purer water supply could have been furnished, it is believed that the death rate from typhoid fever alone would have been diminished 80 per cent, a saving of 1,720 lives, and the prevention of over 16,000 cases, not to mention the expense incidental to sickness.

It is considered a crime to buy and sell human beings, yet there are worse crimes being enacted here in Washington. There are persons who have deliberately prevented the establishment of hospitals for the care and treatment of the poor little unfortunates, and have made it impossible so far by creating a sentiment against providing a filter plant unless the sewer system be extended and improved.

No one will attempt to deny the necessity of an adequate sewer system, but more good will come from purifying the water supply than from the renewal of the present sewers or their extension, especially to outlying farm lands.

Munich, celebrated for its former high death rate from water-borne diseases, had no house sewer system until two years ago. Neither had Paris (now constructing). Notwithstanding this, the death rate was far below the cities which use raw river water. Baltimore, Md., which still clings to her cesspools and surface drains, the water is reasonably pure, and the death rate is far below Washington.

The construction of a filter plant for Washington appears to be easier than for most cities. The Government already owns the land, and has already constructed the reservoirs and basins, one of which could be readily changed and converted into filter beds.

The Delecarlia or the distributing reservoir could be converted into a filter, perhaps the latter, and the water could be allowed to sediment in the Delecarlia before it is filtered. This might be an advantage at times when the water is very muddy.

It is further suggested that a small filter bed—say 100 feet square—be erected in a corner of the reservoir for experimental purposes, in order to determine synchronously with the construction of the filter beds the best material for filtration as well as the rate of flow, etc. In this way the question could be settled without delay. When the filter beds are ready to receive the filtering material, sufficient data would be gathered to determine the best plan of construction and operation.

A part of the receiving reservoir could be used, as now, for storing a supply.

It would seem to be an easy matter to enlarge the filter beds from time to time by utilizing the land just to the north and south of the receiving reservoirs, and in this way be able to furnish all the water required.

Respectfully submitted.

J. J. KINYOUN,
Passed Assistant Surgeon, Marine-Hospital Service,
Director.

The SUPERVISING SURGEON-GENERAL.
U. S. Marine-Hospital Service.

CHART A.

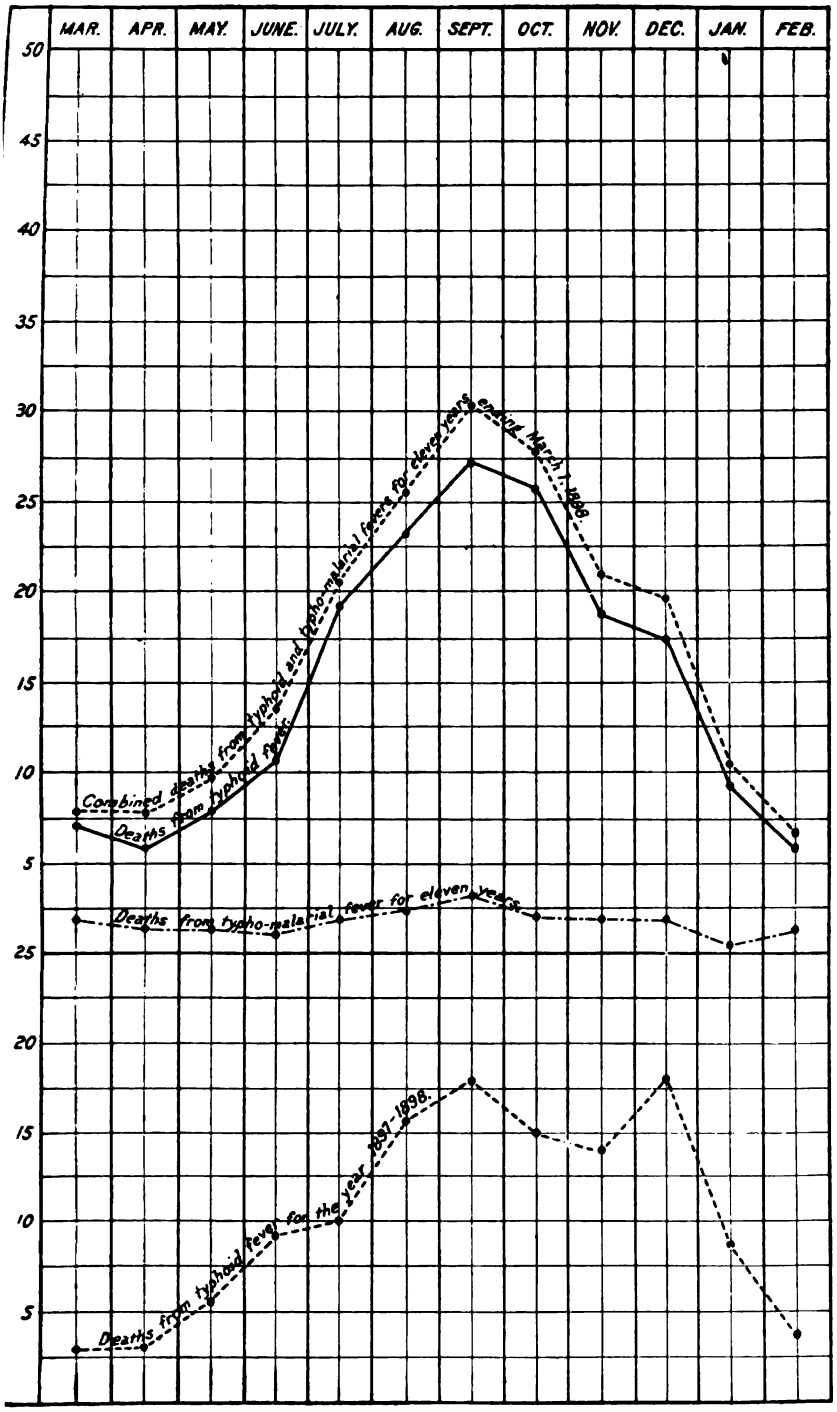

MAR.
APR.
MAY.
JUNE.
JULY.
AUG.
SEPT.
OCT.
NOV.
DEC.
JAN.
FEB.
50
45
40
35
30
25
20
15
10
5
Combined deaths from typhoid and typho-malarial fevers for eleven years ending March 1, 1898
Deaths from typhoid fever
Deaths from typho-malarial fever for eleven years
25
20
15
10
5
Deaths from typhoid fever for the year 1897-1898.

CHART SHOWING COMPARATIVE NUMBER OF BACTERIA PER C.C. IN WATER IN 1886. ALSO DEATH RATE OF TYPHOID FEVER.

By Dr. Theobald Smith.

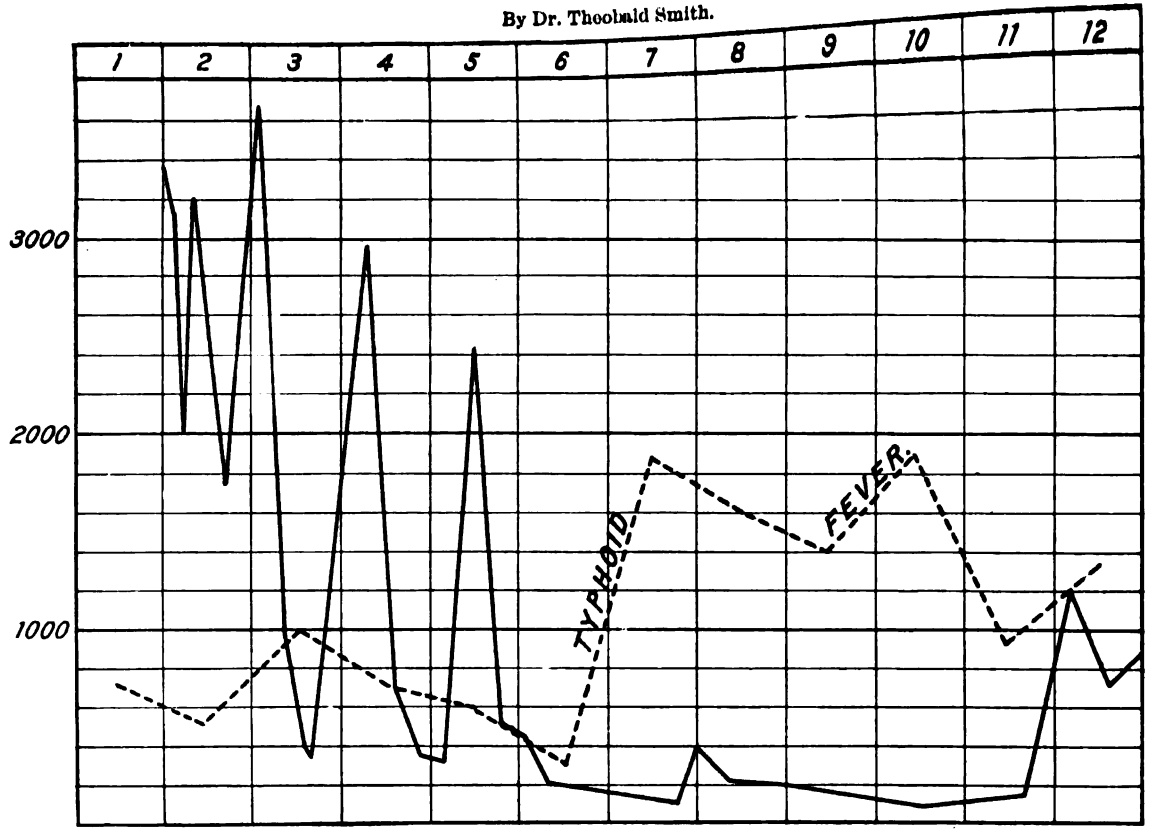


Chart I.

DIAGRAM SHOWING THE SEMIWEEKLY VARIATION IN THE NUMBER OF BACTERIA IN ONE CUBIC CENTIMETER OF POTOMAC WATER. SHADED, AËROBES. BLACK, ANAËROBES.

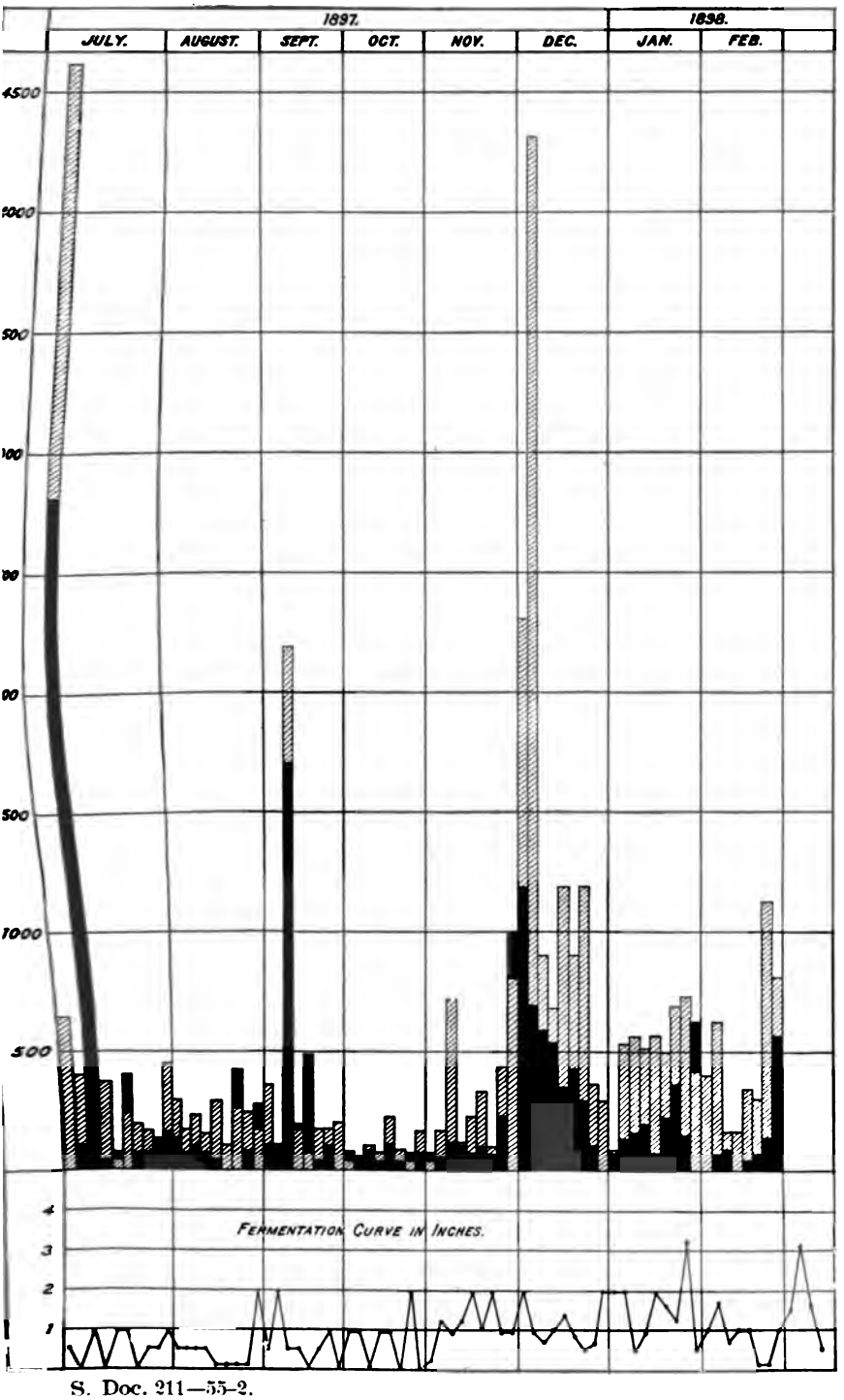
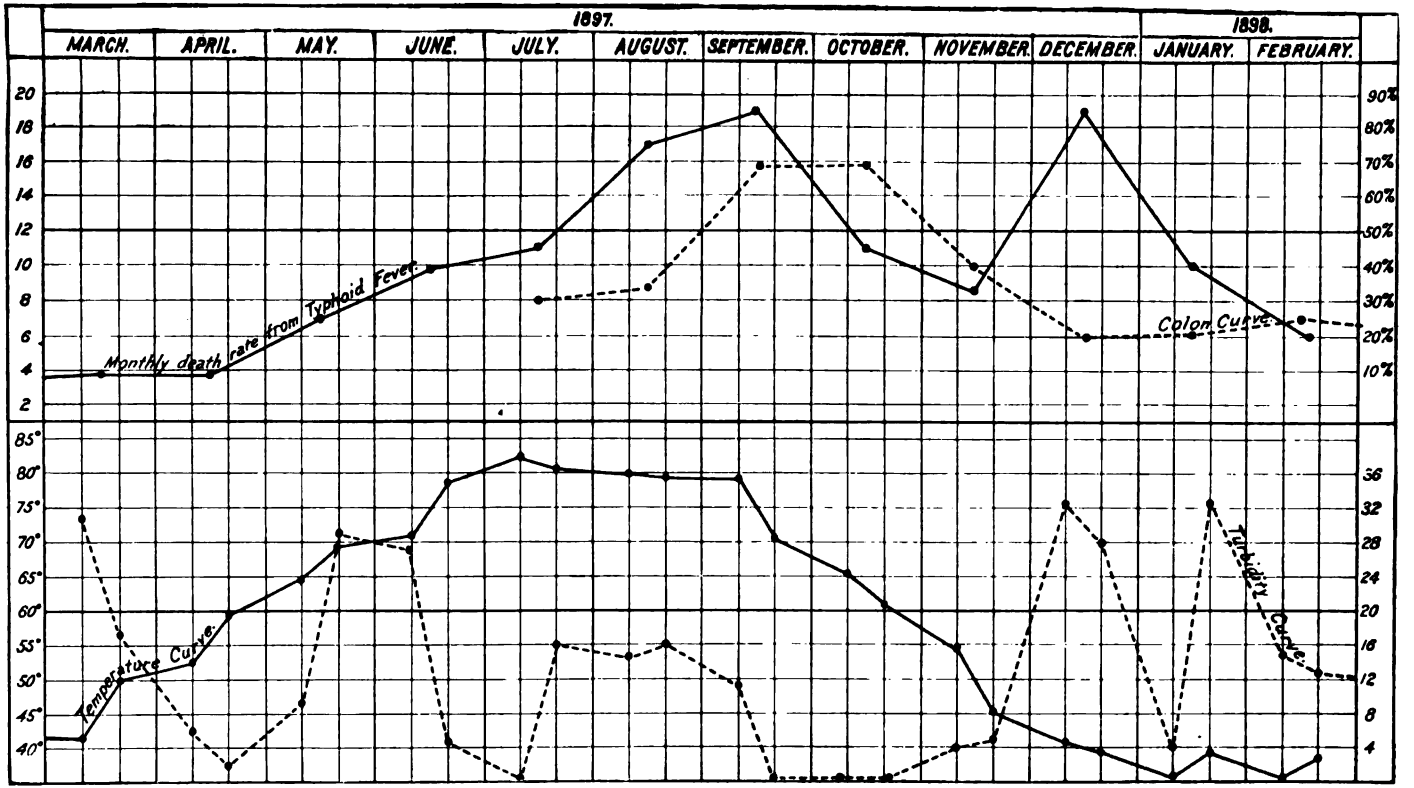


CHART II.

DIAGRAM SHOWING THE RELATION BETWEEN THE DEATH RATE FROM TYPHOID FEVER IN THE DISTRICT AND THE PERCENTAGE OF TIMES COLON BACILLI WERE FOUND IN POTOMAC WATER. TEMPERATURE AND TURBIDITY.



HARRISBURG
V A N I A
SUSQUEHANNA RIVER
PHILADELPHIA
DELAWARE RIVER
WILLMINGTON
NEW JERSEY
DELAWARE
BALTIMORE
DOVER
DELAWARE BAY
Cape May
ANNAPOLIS
DISTRICT OF COLUMBIA
POTOMAC RIVER
RAPPAHANNOCK R.
YORK R.
Cape Charles
HAMPTON
NORFOLK
ATLANTIC OCEAN
Longitude West from Greenwich

DRY DOCK ON THE SEVERN RIVER, MARYLAND.

ARCH 29, 1898.—Referred to the Committee on Naval Affairs, to accompany amendment to H. R. 9378, and ordered to be printed.

Mr. GORMAN presented the following

ETTER FROM THE MAYOR OF THE CITY OF ANNAPOLIS, MD., TRANSMITTING A MEMORIAL TO CONGRESS OF THE MAYOR, COUNSELOR, AND ALDERMEN OF THE CITY OF ANNAPOLIS, STATE OF MARYLAND, "IN FAVOR OF AN APPROPRIATION FOR THE CONSTRUCTION OF A DRY DOCK ON THE SEVERN RIVER AT ROUND BAY, AND THE IMPROVEMENT OF SAID RIVER, IN THE STATE OF MARYLAND." SUBMITTED IN SUPPORT OF A PROPOSED AMENDMENT TO THE NAVAL APPROPRIATION BILL H. R. 9378, FIFTY-FIFTH CONGRESS, SECOND SESSION, SO AS TO SECURE THE SAME AS AN ADDITIONAL MEANS OF OUR NATIONAL DEFENSE.

COUNCIL CHAMBER,
Annapolis, Md., March 28, 1898.

DEAR SENATOR: Under the authority vested in me by the resolutions ly adopted therefor by the city council of Annapolis, Md., I have ie honor to transmit you herewith a proposed amendment to the naval ppropriation bill (H. R. No. 9378), together with a carefully prepared atement in support thereof, which I respectfully request you may subit to the Senate and have printed as a Senate document, and with id inclosed amendment have duly referred to your Senate Committee n Naval Affairs, and thereby oblige this council and,

Yours, very truly,

RICHD. H. GREEN,
Mayor of Annapolis, Md.

Hon. A. P. GORMAN,
United States Senator.

COUNCIL CHAMBER,
Annapolis, Md., March 28, 1898.

'o Hon. A. P. Gorman, Hon. George L. Wellington, United States Senate; Hon. William B. Baker, Hon. Isaac A. Barber, Hon. William S. Booze, Hon. John McDonald, Hon. William McIntire, Hon. Sydney E. Mudd, United States House of Representatives (constituting the delegation from the State of Maryland in the Fifty-fifth Congress, second session):

SIRS: Under authority vesting in me, by virtue of the resolution of ɔ mayor, counselor, and aldermen of the city council of Annapolis,

Md., unanimously adopted therefor, I have the honor to now respectfully submit to you a statement in further support of the matter of the "improvement of the Severn River and the construction by the United States of a dry dock on Round Bay, in the State of Maryland," as recited in Senate bill No. 2778, Fifty-fifth Congress, second session, introduced in the United States Senate on December 14, 1897, by Senator Gorman, and which statement is intended to supplement the report transmitted to you by said council on October 15, 1897, and which was printed on December 14, 1897, as Senate Doc. No. 21, Fifty-fifth Congress, second session, copy of which is attached hereto and made a part hereof. (Exhibit No. 1.)

In their said report this council recited facts and adduced reasons clearly demonstrating, in their opinion, the necessity generally of additional dry docks along our Atlantic coast and the reasons (when establishing said new docks along said coast) why the Chesapeake Bay should not be overlooked, and, of all points on said bay from the mouth of the Susquehanna to the capes of the Chesapeake Bay, why Round Bay, at the head of Severn River, presented advantages not possessed by any other point whereat to construct a national dry dock, and also the due establishment thereat of other public works in connection therewith.

Since the date when submitting to you their said report additional facts have developed which tend not only to confirm the opinion of said council as then expressed in their said report, but also to justify said facts being hereby brought to your special attention, in order that in a brief, condensed statement you may have the same before you to lay before Congress and its proper committees during its present session whenever this subject-matter shall be under its consideration, in the naval appropriation bill (H. R. 9378) or otherwise.

Wherefore I have the honor, on behalf of the city council of Annapolis, Md., to now respectfully submit to you the matters as follows, to wit:

First. Prior to the meeting of Congress on December 5, 1897—to wit, on November 15, 1897—the Secretary of the Navy, Hon. John D. Long, duly submitted to the President of the United States his annual report for the year 1897, wherein he fully and clearly showed that our national dry docks were so few in number, so inadequate in size, and so bad in condition as to justify his declaration "that the most urgent need of the naval service to-day was an increase of docking facilities," and as any diminution of the language of said Secretary on this subject would be to diminish its strength and value; wherefore I now submit hereto an extract therefrom comprised between pages 12 and 17 thereof, to read which is to see the national naval situation as to dry docks, as the same now most unfortunately exists. (See Exhibit No. 2.)

In his regular message to Congress, December 5, 1897, the President of the United States, referring to this subject, said as follows, to wit:

> It is an unfortunate fact that there is only one dock on the Pacific coast capable of docking our largest ships, and only one on the Atlantic coast, and that the latter has for the last six or seven months been under repairs, and therefore incapable of use. Immediate steps should be taken to provide three or four docks of this capacity on the Atlantic coast, at least one on the Pacific, and a floating dock in the Gulf. This is the recommendation of a very competent board appointed to investigate the subject.

The report of the naval board appointed by the Secretary of the Navy on August 17, 1897, to consider the subject of dry docks, submitted to him its report, which was printed on January 31, 1898, as Senate Doc. No. 107, 55th Congress, second session, and as same

strongly corroborates the recitals of this council so heretofore made to you in said Senate Doc. No. 21, I submit a copy thereof in an appendix hereto. (Exhibit No. 3.)

This matter has also received the careful attention of the governor of Maryland—Hon. Lloyd Lowndes—who, on January 24, 1898, duly submitted to the general assembly of Maryland a special message on this subject, copy whereof is also submitted herewith in said appendix. (Exhibit No. 4.)

The general assembly of Maryland, having said message of the governor under due consideration, and acting upon the favorable and unanimous recommendation of its two committees on Federal relations in relation thereto, and to whom the same had been duly referred, adopted with perfect unanimity in both house and senate a joint resolution and memorial to Congress, to whom "it pledged for the State of Maryland the dedication of the necessary land to the United States Government for the purposes required in all these premises." Copy of this joint resolution and memorial is also submitted herewith in said appendix (Exhibit No. 5).

On March 5, 1898, duly certified copies of said joint resolution and memorial were transmitted by the secretary of state of Maryland to each Senator and Representative from Maryland in Congress, and on Monday, March 7, 1898, were duly presented to the Senate by Senator Gorman, and upon his motion were duly published in the Congressional Record of that date. They were also duly presented in the Senate on Wednesday, March 9, 1898, by Senator Wellington, when the following proceedings were had thereon by Messrs. Wellington and Gorman, to wit:

Mr. WELLINGTON. I present a joint resolution and memorial of the general assembly of the State of Maryland in favor of the improvement of the Severn River in that State and the establishment of a national dry dock thereon. As it is a matter of considerable importance, I ask that the memorial be read and referred to the Committee on Naval Affairs.

The VICE-PRESIDENT. The Secretary will read the memorial.

Mr. GORMAN. During the absence of my colleague [Mr. Wellington] I presented this memorial of the legislature of Maryland, and it was printed in the Record in in the proceedings of Monday. My colleague was not aware of that fact. Let it lie on the table.

Mr. WELLINGTON. In view of that fact, I ask that the memorial lie on the table.

The VICE-PRESIDENT. The memorial will lie on the table.

Mr. McIntyre and Mr. Barber introduced same in the House on March 7 and 8, 1898.

Your attention is specially called to the fact that at the beginning of the regular course of studies at the United States Naval Academy, in October, 1897, a new academic course of instruction was established by the Secretary of the Navy "in naval architecture and construction," and wherein the students in said course are now being taught theoretically the subject of "constructing dry docks and docking and undocking ships of war," and as is more particularly recited in a special letter of the Washington Post of December 25, 1897, copy of which is submitted in said appendix hereto. (Exhibit No. 6.) It is alleged that this new course of instruction at the United States Naval Academy at this time is due largely to the fact that American naval students, heretofore sent at the expense of the United States to foreign schools to there study "naval architecture and construction," have been denied the further privilege of being taught said course at said schools, and that the present Secretary of the Navy was thereby forced to establish at this time said new course at the United States Naval Academy at Annapolis, Md.

In view of said fact, this council suggests an additional section to Senator Gorman's Senate bill No. 2778, which shall provide that the construction of the dry dock on Round Bay therein provided for shall be placed under the direction and supervision of the professor or instructor in charge of said new course of naval architecture and construction, and I have therefore prepared an amendment embodying that feature, and respectfully request that you may submit same as an amendment to naval appropriation bill (H. R. 9378) or to one of the dry-dock bills introduced, one by Senator Hale (S. 2528) and the other by Hon. Henry C. Loudenslager (H. R. 4371), copies of each of which bills are submitted herewith (Exhibits Nos. 7 and 8).

The public press of Maryland have of late with very great unanimity indorsed the views of this council in sundry ways on this subject. The Baltimore Sun, of December 13, 1897, in an able article shows that Annapolis is the "key to Washington," and was so considered one hundred years ago by Major L'Enfant, the celebrated French engineer, and practically shown to be such by Gen. B. F. Butler during the whole of the late civil war, and which article is submitted in said appendix hereto (Exhibit No. 9). See also Butler's book, pages 184–187, for confirmation of the truth of the recitals in said article.

An article from the pen of a worthy and able citizen, Dr. I. M. Worthington, of Annapolis, in the Baltimore Sun of February 24, 1898, is reproduced in said appendix, showing the opinion of experts who have heretofore carefully examined this subject. Another article from Crownsville, Md., and also from the Maryland Republican of a recent date, are also submitted in said appendix, and to which are added (4) articles from the Baltimore Sun of December 11, 1897, January 14, February 7, and February 9, 1898, of a similar tenor. (Exhibits Nos. 10, 11, 12, 13, 14, 15, 16.)

The terrific cyclonic storm which visited our Atlantic coast from Maine to Florida during the first days of February, 1898, in consequence of which hundreds of lives were lost, and property on land and sea was destroyed in an amount of several millions of dollars, showed that the port of Annapolis was then sought and availed of as a safe harbor of refuge for and by all vessels which could cross the bar at its entrance, and would have been sought by vessels of deeper draft if they could have safely entered this harbor of Annapolis.

Immediately after the blow of the blizzard had subsided the temperature in this latitude fell abnormally low, so much so that thick ice formed in the upper Chesapeake Bay; yet, all the same, said ice was confined to so much of said bay as lay between Baltimore and Thomas Point, leaving the lower Chesapeake Bay and the harbor of Annapolis comparatively free from ice. Evidences of the effects of said storm and of said freeze of February, 1898, and of matters connected therewith, are shown in extracts from the Boston Daily Advertiser of February 2, 1898, and in 7 extracts from the Baltimore Sun, all submitted in said appendix. (Exhibits Nos. 17, 18, 19, 20, 21, 22, 23, 24, 25.)

No American journal has of late evinced a greater degree of interest in the subject of dry docks generally than has the Boston Daily Advertiser, the official paper of the city of Boston and also of the State of Massachusetts, whose former chief proprietor and manager, Hon. William E. Barrett, is now in Congress from the Seventh district of Massachusetts, a district which includes parts of the city of Boston, and whose able Washington correspondent, "Atherton," has been, and still is, it is alleged, in close touch with the Secretary of the Navy, and

Speaker of the House of Representatives, and the delegations in ıgress from the New England States, and especially with the chair- ı of the Committee on Naval Affairs in the House, Hon. Charles Boutelle, and the chairman of the Committee on Naval Affairs in Senate, Hon. Eugene Hale; and as both of the latter are from the te of Maine, as is also the chairman of the Committee on Ways and ıns in the House, Hon. Nelson Dingley, and is also the Speaker, n. Thomas B. Reed, the chairman of the Committee on Rules, there- ; I respectfully submit that all of "Atherton's" letters on dry docks 'e a very special value at this time for the public, outside of the w England States; and wherefore certain of his said dry-dock and st-defense letters, published in the Boston Daily Advertiser of Feb- ıry 7, 11, 12, 17, and 21, are submitted in said appendix hereto ɪhibits, Nos. 26, 27, 28, 29, 30); and also of February 26, March 5, 10, 15 (Exhibits, Nos. 42, 43, 44, 45*a*, 45*b*).

Your attention is also called to the late past and present condition of : New York dry docks generally, one of which cost the United States ; sum of $2,003,498.05, as shown in letters in the New York Herald February 6, 1898, and other dates, which conclusively show a want wisdom heretofore on the part of the proper naval authorities locat- g so many of said docks at one and the same place under conditions ıich seem not only serious, but aggravated by virtue of reasons recited said letter, copies of which letters are hereto attached (Exhibits Nos. , 32, 33). It was this bad and inadequate condition of the New York y dock in August, 1897, which no doubt compelled the Secretary of the avy to send the United States battle ship *Indiana* to the British dry ɔck at Halifax, Nova Scotia, to be there docked, and for which the nited States, on August 17, 1897, paid the Halifax Graving Dock Com- any, limited, for docking and undocking the said *Indiana*, including ıbor and material used in connection therewith, the sum of $3,492.02. his sum was so paid for a service extending only from 7 a. m. Thurs- ay, August 12, 1897, to 10 a. m. Monday, August 16, 1897, making (ex- luding Sunday) the cost of over $3,000 for 3 days' and 3 hours' use of aid foreign dry dock.

The attention of this council has also been called to the pamphlet by he Simpson Dry Dock Company, etc., and wherein preference is given o timber dry docks, but as the report of the naval board on dry docks s strongly in favor of stone or stone and concrete over timber dry locks, this council is still of the opinion that if any dry dock is to be uilt at Round Bay that the same should be built of granite or granite ınd concrete; not only because of greater durability, but also because f the proximity of the extensive and valuable granite and stone quar- ies on the Susquehanna at Port Deposit, at Woodstock, Ellicott City, Guilford, in Howard County, Md., about 1 mile north of Laurel, and at ther places, with cheap transportation by rail or water from most of aid quarries to Round Bay, thereby reducing the costs of construction o the minimum. Two articles from the Baltimore Sun on said matter f timber docks are submitted in said appendix hereto (Exhibits Nos. 4*a*, 34*b*), and also a valuable article from the Baltimore American of March 4, 1898, entitled "Wealth of stone in Maryland," is also sub- nitted (Exhibit No. 35).

This opinion of this council in favor of granite, or granite and con- rete with granite facing, in preference to timber is adhered to not- vithstanding the recommendation and recitals of the House Committee n Naval Affairs in its bill (H. R. 9378, p. 26), the naval appropriation

bill, reported to the House with House Report 775 on March 22, 1898, as follows, to wit:

Repairs and preservation at navy-yards and stations: Toward the construction of four timber dry docks, two hundred thousand dollars each; in all, eight hundred thousand dollars; said dry docks to be not less than seven hundred feet in length, and of other dimensions suffic ent to meet the present and probable future requirements of the largest vessels of the Navy and auxiliary fleet. One of these docks to be located at the navy-yard, Portsmouth, New Hampshire, to cost, when completed, not exceeding eight hundred and twenty-five thousand dollars; one at the navy-yard, Boston, Massachusetts, to cost, when completed, not exceeding eight hundred and twenty-five thousand dollars; one at the navy-yard, League Island, Pennsylvania, to cost, when completed, not exceeding eight hundred and twenty-five thousand dollars; and one at the navy-yard, Mare Island, California, to cost, when completed, not exceeding eight hundred and twenty-five thousand dollars.

The preference of stone with which to construct dry docks, instead of timber, was advocated not only by the Naval Dry Dock Board in its report, Senate Doc. No. 107 (Exhibit 3 herein), but has also been advocated by the Naval Bureau of Yards and Docks, and as late as March 26, 1898, was strongly advocated before the Senate Committee on Naval Affairs by Admiral Matthews, the able chief of the Bureau of Yards and Docks, as recited in an extract from the Washington Star of March 26, 1898, attached hereto.

The only reason alleged at this time for constructing of timber the four dry docks provided for in the naval appropriation bill (H. R. 9378) is that of economy; but it is respectfully submitted that it is wasteful extravagance to construct dry docks of timber, knowing in advance they can not be permanent; are not durable, but subject to constant decay and repair, sometimes at very great cost; can not last over twenty years, more or less, to be then replaced by other new and more costly structures; and hence it is respectfully submitted that said economy is not only not wise, but rather a useless and extravagant expenditure of the public moneys, and at best seems to be a niggardly national policy.

Said extract is as follows, to wit:

FLOATING DRY DOCKS—HEARING OF THE SENATE NAVAL AFFAIRS COMMITTEE.

Rear-Admiral E. O. Matthews, chief of the Bureau of Yards and Docks of the Navy Department, appeared before the Senate Committee on Naval Affairs to-day in opposition to the proposition of Senator Platt, of New York, to authorize the construction of a floating steel dry dock of the Clark and Stanfield pattern in the New York Harbor.

Admiral Matthews also expressed his disapprobation of wooden docks and favored concrete docks faced with granite.

Assistant Naval Constructor Dashiell expressed the opinion, in his statement to the committee, that the Clark and Stanfield patent was entirely feasible, and said he thought it should be adopted at all places where the Government contemplates the construction of docks, except League Island. At this place he did not consider any addition to the present docking facilities necessary.

Other speakers in favor of the project were Mr. Clark, one of the promoters of the enterprise; Wallace Downe, president of the International Dry Dock Company; while others against it were Mr. L. E. Payson, attorney for the Newport News Shipbuilding Company, and W. N. Dykeman, of the New York Dry Dock Company.

Outside of a special dispatch of January 24, 1898, to the Baltimore Sun, this council has not as yet seen any comments of anyone adverse to the establishment of a dry dock at Round Bay; wherefore I respectfully submit said dispatch for all it is worth, and mark same "Exhibit No. 36," and in reference thereto I submit that the only reasons alleged as the sole basis of objection thereto are: (1) Lack of water facilities; (2) Too far from the sea.

The author of said dispatch seems to have overlooked the fact that Senator Gorman's bill (S. 2778) fully provides for all adequate water

cilities, both as to depth and width thereof, and securing same will ıd must end that ground of objection. (Same as exists at Boston, eague Island, Norfolk, and Mare Island, hereinafter more particularly ferred to.) As to the second objection, said author fails to note that ıe Chesapeake Bay is one of the largest arms of the sea on our Atlan- c coast; that it is in fact an inland sea extending from the main tlantic Ocean to Thomas Point, at the mouth of the Severn River, hich river, once deepened and widened, as sought to be done by Sen- or Gorman's bill (S. 2778), will render said river an extension of the a itself up to and including Round Bay, for all purposes of depth and width of water.

Said dispatch recites "that a battle ship or cruiser injured in action ay require the immediate use of a dock, and the nearer the better, it claimed." In view of the fact that we have had but three periods ıly in one hundred years of "battle ships or cruisers being injured in ction," to wit, in the war of 1812, in the Mexican war, and in the civil ar of 1861, and as dry docks are needed for docking ships at all peri- ls of every month of every year, due to very numerous causes other ıan the sole cause of "injury in action," it would seem that said basis objection is not well founded in fact. In evidence of the truth of the regoing recitals see extract from the Baltimore News of March 4, 98, submitted in the appendix hereto (Exhibit No. 37). I here and w make this reply to said dispatch, because of the invalidity of the jections so alleged, and which left unnoticed and not explained might nd to leave a false impression.

As the inauguration of the aforesaid entirely new course of instruc- on at the United States Naval Academy in "the constructing of ships ıd the building of dry docks and the instructing certain Naval Acad- ny classes in the docking and undocking of ships" seems to promise full success, I respectfully submit that it would be most appropriate at these classes should have some practical instruction, under the ief instructor of said course, in the building of a dry dock of the first ass in the immediate proximity of said Academy itself, and wherein id students should have not only a practical object lesson of con- ructing such docks, but thereafter to also enjoy the frequent, if not nstant, daily lessons of being taught how to dock and undock the ıips of the Navy, and also all practical lessons of repair, fitting, and fitting such docks, to meet the constant wants and demands of our aval service.

Should any further objection be made because of a want of large forces f workmen, tools, and supplies needed in all these premises, a proper eply would easily lay in pointing to Baltimore and Washington for oth, either of which named places can be reached in thirty minutes rom Round Bay; and should that not fully answer and remedy all the bjections, then a proper navy-yard for construction and repairs can e duly and easily established at the same place to meet all possible equirements in connection with such dry dock, and its constant uses or our national naval service for all future time. If the construction f a dry dock at Round Bay necessarily and logically involves the due stablishment of a regular navy-yard at the same place, then so be it, nd the sooner the better for the nation and our national defense.

The Secretary of the Navy, on page 13 of his said Annual Report for 897, recites that there are seven naval strategic divisions of our Atlantic oast, and that the third division extends from "Sandy Hook to Cape Henry."

The Chesapeake Bay is situate in this third division, and the only

dry dock situate in this division is that situated at League Island, 5 miles below Philadelphia.

In regard to League Island the naval board on dry docks, page 4 of Senate Doc. No. 107, Fifty-fifth Congress, second session, recites as follows, to wit:

At League Island, at the navy-yard, there is a timber dock 451 feet 10 inches available length; 52 feet 10½ inches width at sill; depth over sill at mean high water, 25 feet 6 inches. This yard is 4 miles from Philadelphia, which is 86 miles from the capes of the Delaware Bay. The channel to it from the sea is obstructed by bars, and but 26 feet of water can be carried at high water through dredged and tidal channels. Philadelphia is a commercial center, and from its interior communications is an admirable site for building ships. Its approach is too difficult for prompt repair of those injured, and is obstructed by ice in winter. In war, both approach and egress can be readily closed by an enemy with mines placed below any of its defenses.

It was in this stream, and on its rock ledges below League Island, where the United States battle ship *Brooklyn* was stranded in the winter of 1896, and there dangerously locked in heavy ice, from which, with great difficulty, she was extricated and finally saved; but not without great damage, to repair which she had to be towed to Cramp's shipyard on the Delaware and there docked.

The said accident to the battle ship *Brooklyn*, occurring in midwinter, and due to running on rocks in Delaware Bay, seems not to be unusual, and because as late as March 18, 1898, a similar accident befell the large merchant ship *Illinois*, an old American liner, as a telegram in the Baltimore Sun of March 19, 1898, fully discloses, as follows, to wit:

THE ILLINOIS REPORTED TO BE LEAKING.

Philadelphia, March 18.—The old American liner *Illinois*, Captain Roberts, hence for San Francisco, which ran aground near Bellevue Station Wednesday night, remains fast, resisting the most powerful efforts of a combined force of tugs to relieve her from the obstruction that holds her and threatens serious damage. Old and experienced tugboat men are confident in their opinions that she is on a rock, and it is reported that she is leaking. Three hundred tons of cargo have already been taken out of her forward hold, as she is held by the head, but this did not seem to bring her up any.

It is reported by those who have been alongside the *Illinois* that there are 18 feet of water under bow, about 24 feet amidships, and 27 feet at the stern. The cause of the accident, if known, is kept secret, and the agents and the officials will not give out any information about the vessel.

It is respectfully submitted that Chesapeake Bay—its vast trade, including that of Baltimore, and its freedom from ice—is surely of as great importance to the nation as is Delaware Bay, so frequently obstructed by ice blockades, and its trade including that of Philadelphia, and should at least equally and fully enjoy all the advantages incident to a separate dry dock at a place on its waters suitable therefor, as much so in fact as to a separate and independent system of defense, naval and military.

League Island is 82 miles distant from the capes of Delaware Bay; the mouth of the Severn River is 122 miles distant from the capes of the Chesapeake Bay, making a difference in distance of about 40 miles, and a difference in time to reach the same from the sea of between two and three hours. For vessels coming north from southern waters a dry dock at Round Bay would be reached in about the same time as at League Island.

Special attention, however, is called to the fact that the entire distance from the capes of the Chesapeake Bay to the mouth of the Severn River is along one continuous, deep, and broad channel, with no obstruc-

tion of any kind at any place or at any time, and perfectly free from ice in winter; whereas the channel of the Delaware Bay from the capes thereof to League Island is not only obstructed by dangerous bars at many localities, but is liable to obstruction by ice in winter.

Existing conditions and the advantages for the future would therefore seem to be in favor of locating a dry dock at Round Bay, and are surely as great, if not greater, than those alleged for locating one at League Island, and the present time and present conditions make it opportune to consult not only efficiency but localities in distributing geographically the several dry docks so absolutely and urgently needed for our naval service.

Said naval dry dock board, in its report to the Secretary of the Navy, on page 4 of Senate Doc. No. 107, Fifty-fifth Congress, second session, recites as follows:

At Portsmouth, N. H., there is a dock at the navy-yard. The dock is a balanced lock of wood, 350 feet long, 90 feet wide at top and 60 feet wide at sill; its lifting capacity is 1,500 tons. This yard and dock are exposed to gun fire from sea and are situated on a river whose tidal currents are very strong, and whose channel is tortuous. Portsmouth is not a commercial center; its harbor is protected.

You will observe that neither Portsmouth, N. H., nor League Island, Pa., were included in the recommendations of said naval dry dock board as sites whereat the United States should establish new dry docks, yet notwithstanding said recitals of said board in regard to said two places, so strongly declaratory of their want of suitability therefor, but ignoring said recitals of said board, the House Committee on Naval Affairs have recommended both of said two places as sites whereat the United States should construct two new first-class dry docks of timber.

It is alleged that delegations of citizens from Philadelphia, and the delegations in Congress from Massachusetts, New Hampshire, and Pennsylvania have been very active in regard to securing a new dry dock at each of said three named places, and have been potential enough to overcome said adverse recitals of said naval dry-dock board to the extent, at least, of securing a recommendation from the House Committee on Naval Affairs for the construction at great cost of a new timber dry dock at each of said three named places.

In this connection, the concluding portion of "Atherton's letter," published in the Boston Daily Advertiser of March 16, 1898, constitutes instructive and suggestive reading in these premises, and which letter is as follows, to wit:

DRY DOCKS.

Five agreed upon by Naval Committee—Boston and Portsmouth provided for—New torpedo boats.

Washington, March 15.—The House Committee on Naval Affairs to-day voted 7 to 3 to authorize the building of five modern dry docks at this session of Congress, one each at Portsmouth, Boston, League Island, Algiers, La., and Mare Island.

League Island is 5 miles from Philadelphia, and Mare Island is in California.

The question of material went over until to-morrow, but it is thought that with the exception of the one at Algiers, which will be a floating steel dock, they will all be made of concrete. In order that this provision in the bill may not be defeated on a point of order that it is "new legislation," the Committee on Rules will be asked to report a special rule permitting it to go through. The matter of cost also went over till to-morrow, but they will doubtless be constructed on the lines laid down by the recent Bunce report, which treated minutely of what ought to be done at various places in the country as regards docking facilities.

For Boston the Bunce board recommended a concrete dock 750 feet long, 90 feet wide, and 30 feet deep. Such a dock when constructed will accommodate the very largest vessels of the Navy now in use or in contemplation.

All of the new docks will be modern in every way and fully equal to any tasks that may be placed upon them in the way of docking our great battle ships. These docks are being authorized as a part of the scheme of putting the national defense in the most complete form to meet any exigencies which may devolve upon it, and everybody has stated from the start that in order to have an adequate defense the country must be provided with additional docks. Our present docks are practically obsolete. The Naval Committee will not stop at dry docks or battle ships.

To-morrow Mr. Bull, of Rhode Island, a member of the committee, will offer an amendment authorizing six new torpedo boats and six new torpedo-boat destroyers, to cost $200,000 each. This will probably be agreed to.

In addition, the committee will authorize an enlargement of the pay, medical, and engineering corps of the Navy in order to provide men enough to man all the additional craft that are now being pressed into service.

The naval bill, carrying all these things, will be reported on Monday next, and will go through without much opposition.

It will be protected to a certain extent by the special rule which Speaker Reed will draft for its consideration, which will make these new authorizations less vulnerable to the attacks of points of order.

Whatever falls by the wayside, if anything, it will not be the dry docks. All agree that they are essential.

The placing of both Portsmouth and Boston in the list will enable New England interests to stand solidly together for the proposition, which might not have been the case if one New England section had been taken and the other left.

ATHERTON.

In further confirmation of the efforts of the delegation in Congress from Massachusetts to secure a new dock at Boston I submit herewith an extract from the Washington Post of March 28, 1898, as follows, to wit:

CAPITOL CHAT.

When the House voted Saturday on Uncle Joe Cannon's amendment to reduce the number of dry docks provided for in the naval bill there was some surprise that Representative Joe Walker, of Massachusetts, was among its supporters. The emphatic old Puritan legislator cried "aye" with all his lung power when the chairman put the vote. Mr. Walker was and is loyal enough to the proposition for a dry dock at Boston, but he has a personal grievance on his soul which influenced his vote.

This is the story: Everybody at the capital knows that the Massachusetts delegation has been working early and late for a dry dock at Boston, and that the twelve Republicans and one Democrat in the House from that State are pretty constant in their attendance. However, few are absent more than Representative Barrett. He has large newspaper interests to manage in Boston, and divides his time, during sessions of Congress, between this city and Boston. But Mr. Barrett has worked earnestly for the Boston dry dock, and a few days after he was hissed in the House he proposed a meeting of the Massachusetts delegation, who should call on the Naval Committee en masse and urge the city's claims. When the time for the hearing came Representative Barrett was compelled to be in Boston and was the only Republican of the delegation who did not attend the hearing.

When the naval bill was to be called up in the House, Representative Barrett addressed a letter to each of his colleagues requesting their presence during the consideration of the measure, that the interests of the Boston dry dock might be properly protected. It was this communication that displeased several members of the delegation, among them Representative Walker. Always emphatic in the expression of his opinions, Mr. Walker has exhausted his vocabulary of forceful Puritan phrases, some of which might not look well in print, every time the subject of the Boston dry dock has been mentioned to him since. He went so far last week as to intimate ironically that the map of the coast of Massachusetts showed it to be a straight line before the time of Representative Barrett, who was apparently the real discoverer of Boston Harbor. That is why Mr. Walker voted so emphatically for Chairman Cannon's amendment. It gave him the best opportunity he had during the week to express his disapproval of Mr. Barrett.

The successful efforts of the friends and advocates of establishing for our Navy new dry docks at Portsmouth, N. H., at Boston, Mass., and at League Island, Pa., are therefore respectfully recommended not only to the careful and serious attention of, but as examples which might be profitably followed by the delegation in Congress from Maryland, whose general assembly, as recited in Exhibit No. 5 of this state-

ment, has so recently and so strongly petitioned Congress to establish one of its naval dry docks on an arm of the Chesapeake Bay, to wit, on the Severn River, at Round Bay, near the United States Naval Academy. Attention is also called to the fact that not only were Portsmouth, N. H., and League Island, Pa., not included in the official recommendation of said naval dry dock board, as suitable sites at which to establish new dry docks, but no official estimates of the costs of said construction at said named places have as yet been submitted to Congress, so far as is now known.

Not only this, but it would further officially appear that all new dry docks to be hereafter constructed by the United States are recommended to have a depth of water over their sills of not less than 30 feet, and that the channels of approach to said docks should have ample width and depth of water, the latter to be not less than 30 feet.

It also officially appears that the depth of water in the channel of Boston Harbor does not exceed 27 feet, at League Island not to exceed 26 feet, and at Mare Island not to exceed 20 feet, nor has any official estimate been made so far as is now known or reported to Congress of the cost necessary to increase to the proper width and depth said channels of approach to the sites for said proposed dry docks at said named places. The only exception where the estimates of such probable cost has been made is that of Mare Island, Cal., at which place Hon. Joseph G. Cannon, of Illinois, during the debate on the naval appropriation bill (H. R. 9378) on March 25, 1898, stated on the floor of the House that the Chief of United States Engineers had reported to Congress that such cost in that case would aggregate the sum of $310,000. (This sum would be the probable cost of dredging a channel 2 miles long in order to secure a depth of 30 feet, and not $200,000, as stated by Admiral Matthews in the extract from the Washington Post of March 13, 1898, hereinafter submitted.) In confirmation of said recitals an Associated Press dispatch from the Washington Post of March 13, 1898, is here submitted, which discloses the fact that prior to making said recommendation the House Committee on Naval Affairs was in possession of all said facts relating to a want of depth of channel at said named places. Said extract is as follows, to wit:

PROPOSED NEW DRY DOCKS.

No decision by Naval Committee as to number or location—Necessary depth of channel not found at Mare Island, Boston, or League Island.

The Naval Committee of the House did not reach any conclusion yesterday relative to the number and location of the dry docks to be authorized in the naval appropriation bill, which is the main question left open. The general opinion in the committee seems to favor three or four new docks. The Bunce board recommended new docks at Boston, Algiers, La., and Mare Island, Cal., and an enlargement of the dock at League Island, Pa., so that it will accommodate the largest battle ships. The Pennsylvania delegation is straining every nerve to secure an entirely new dock at League Island.

Docks capable of accommodating battle ships would have to have a depth of channel leading to them of 30 feet, and Commodore Matthews, of the Bureau of Yards and Docks, who was summoned before the committee, rather startled the members by his statements as to the depth of the channel to at least one of the proposed docks—that at Mare Island, Cal. He said the channel was not over 20 feet for 2 miles, and that it would require $200,000 to dredge it to the requisite depth of 30 feet. The channel at Boston is only 27 feet, and the channel at League Island is about the same depth. This complicates matters considerably, and when the committee adjourned little progress toward a conclusion had been made.

As new dry docks of the dimensions and requirements, as recommended by said naval dry-dock board and by the House Committee

on Naval Affairs, can not well be constructed at any of said named places, without at the same time securing a greater depth and width of the channels of the water approaches thereto, hence that which is admitted to be necessary to be done for a dry dock on the Severn River, at Round Bay, to wit, to widen and deepen the channel of the Severn River approach thereto is exactly that which is requisite and absolutely necessary to be done in regard to the water approaches at Boston, League Island, Mare Island, and at Norfolk, differing only in this, to wit, lesser cost for channel improvements and lesser cost of dry-dock construction at Round Bay than at any one of said four places, even supposing it to be of granite or of granite and concrete.

Said naval dry-dock board, in its report on page 7 of Senate Doc. 107, Fifty-fifth Congress, second session, also calls attention to the fact that among the positions along the Atlantic coast most likely to be sought by an enemy is "the Chesapeake Bay," and among the positions along said coast, strategically important to be strongly held by us, is the "Cape Henry Channel at the entrance of said bay."

But it is respectfully suggested that while a perfect defense of the "Cape Henry Channel on the Chesapeake Bay" constitutes, no doubt, a proper part of the perfect defense of Hampton Roads, of Norfolk, of Newport News, and of the mouth of the James River generally, yet all the same, said defense does not, and can not well be considered as the complete defense of the entrance to Chesapeake Bay, between Cape Henry and Cape Charles, and hence can not necessarily be considered a complete defense to the upper Chesapeake Bay, and particularly of the Chesapeake Bay approaches to Annapolis and to the city of Baltimore.

Wherefore the suggestion is respectfully made that, to aid in a proper defense and stronger protection of the harbor of Annapolis and of the United States Naval Academy and of the Chesapeake approaches to Baltimore, the Secretary of War, the Chief of United States Engineers, and the Board of Ordnance, Fortifications, and Coast Defenses should be requested to duly establish, as soon as may be, land or floating batteries, ample in number, with guns proper in kind, caliber, and range, and otherwise properly conditioned and protected, at Thomas Point, Tolleys Point, Horn Point, Greensbury Point, Hacketts Point, Sandy Point, and at the "Bodkin," on the west shore of the Chesapeake Bay, and also along the western shore of Kent Island, or by properly utilizing the shallow water at, along, or off all said named places, and because between said named points and Kent Island the Chesapeake Bay is not only the narrowest possible from Baltimore to the capes of the Chesapeake, but this zone or section of the bay constitutes the extreme northern limit of its deep water; so much so, in fact, that the United States engineers, in order to secure a depth of 27 feet of water for the bay channel to Baltimore, have been compelled to dredge the bottom of Chesapeake Bay as far south as the mouth of the Magothy River, which river debouches into the Chesapeake Bay within the aforesaid zone or section.

It is confidently believed that, while such proposed defense would afford an additional protection (as near complete as may be) to Baltimore and to the harbor of the capital of this State, it would also materially afford a proper protection by way of a rear defense to the national capital at Washington, buttressed, as it were, upon the west shore of the Chesapeake Bay.

This matter has already received the careful attention of the general assembly of Maryland at its present session, and a joint resolution and memorial to Congress in regard thereto has unanimously passed

ouse of delegates and State senate, copy whereof is submitted
vith (Exhibit No. 37A).
view of these premises, and also because said fortification matters
r under the law or customs of the military service) would seem
volve primarily rather upon the War Department than upon Con-
, it is therefore respectfully suggested that the delegation now in
ress from Maryland may duly address a communication to the
tary of War, requesting that under his direction a careful examina-
e made by the Chief of Engineers and Board of Ordnance and
fications of the Chesapeake Bay at all the several points and places
d herein, with a view of ascertaining the probable cost of duly
lishing proper batteries, floating or permanent, at each thereof at
rly date, including all costs of acquiring title of ground at all said
s and places adequate to establish said batteries, and that the
s of their said examinations be immediately thereafter duly
ted to Congress for its information.
view, however, of existing international conditions, it is alterna-
suggested that the results of such an examination by said Fortifi-
Board might well be submitted by the Secretary of War to the
dent, and that the proper defense of said named places might
by be secured, and the total cost thereof might be properly defrayed
the $50,000,000 appropriated March 10, 1898, by Congress to be
ded at the President's discretion; provided always that such costs
not be properly paid out of other appropriations for coast defenses
fore or to be hereafter made for the fiscal year ending June 30, 1899.
views herein expressed are fully confirmed by the Baltimore Sun
editorial in its edition of Wednesday, March 24, 1898, as follows,
:

DEFENSE OF ANNAPOLIS.

threatened trouble with Spain had the effect of disclosing the defenseless
ion of certain parts of this country. As soon as war seemed imminent
ss was brought face to face with the exposed condition of our seaports, and
tly voted an emergency fund to the President, to be used according to his dis-
.
President at once set to work on the coast defenses, and in a marvelously
ime fortifications have been completed or placed under way, big guns mounted
additional force of artillerymen enlisted to work them. Work which had
y begun for the defense of Baltimore at North Point and Hawkins Point, on
tapsco, was hurried up, and the force at the Sheridans Point battery, on the
ac, was doubled. The latter battery is designed for the protection of Wash-
from the approach of a naval force.
planting of these batteries on the Patapsco and Potomac is a concession that
ssible for a hostile fleet to enter the Chesapeake Bay. Should such an event
pily occur, such a fleet would find the capital of Maryland and the seat of a
mportant government institution absolutely defenseless and open to capture or
ction. Not only this. Annapolis is the seaport and gate to Washington, from
it is distant less than 25 miles, and, as the nearest seaport of the national
l, it should be protected.
whether Washington would be in any danger or not, Annapolis is of itself
ently important to demand protection, and it should be fortified. It is hoped
he Maryland representatives in both houses of the Congress will call the
ent's attention to this matter and urge the expenditure of a portion of the
illions appropriated for defense in fortifying and protecting the capital of
tate and the Naval Academy. One-half of the fifty millions, it is reported,
eady been spent, and if a portion of it is to be used for Annapolis there is
e to be lost.
dition to these defenses, the advantages of a great Government dry dock in
rern, close to Washington and Baltimore, and secure from foreign attack, are
nt, and the bill providing for the construction of such a work should be
as speedily as possible—indeed, it might be advisable to spend some portion of
ergency fund in this and other works at Annapolis. The old Statehouse
be a most conspicuous mark for target practice by hostile ships going up the
nd it would be an everlasting disgrace to permit the capital of one of the
to be destroyed by an invader.

In this connection, I submit herewith a brief memorandum of the powers and duties, under the law, of said Fortification Board, with full references to its vast labors in the past at other places along our sea-coast; but wherein the places along the Chesapeake Bay herein named have not received the official attention of said board (Exhibit No. 38.)

I also submit herewith (Exhibit No. 39) an article entitled "Coast defense works," the same being a table of estimates, itemized, submitted by General Miles, U. S. A., and approved by the Secretary of War, of the several sums of money alleged to be necessary and recommended to be appropriated by the Fifty-fifth Congress, second session, to protect the places named in said article.

This table (which also fails to include any of the places named herein) shows that the estimate for the defense of our Atlantic coast from Maine to Florida aggregate the sum of $10,915,500, distributed geographically as follows, to wit:

For the coasts along the States north of Chesapeake Bay, the sum of $7,796,500; for the coast along the States south of and including Chesapeake Bay and Hampton Roads and the approaches to Washington City, the sum of $3,119,000.

In other words, the distribution for the States north of Chesapeake Bay is as to the distribution for the States south of Chesapeake Bay as is 1 to 2½.

I have the honor to again invite your attention to the two bills heretofore referred to as exhibits 7 and 8, to wit: Senate bill No. 2528 and House bill No. 4371, Fifty-fifth Congress, second session; the former introduced by Senator Hale and the latter by Representative Loudenslager, each having for its object to appropriate the sum of $5,558,113 for the construction of new dry docks and for the betterment of old dry docks at the specific places named therein.

You will observe that none of said places can well be said to be situated on the Chesapeake Bay, unless the Norfolk Navy-Yard can be so considered, and the last action of the House Committee on Naval Affairs, March 22, 1898, seems to have even left Norfolk out of present consideration.* The effect of this action of the House Committee on Naval Affairs has been to enlist the zealous efforts of some of the delegation in Congress from Virginia to secure for the Norfolk Navy-Yard a degree of Congressional recognition on new dry docks such as said committee has accorded to the other places named in its said recommendations.

In confirmation of this recital, I submit the following extract from the Washington Post of March 21, 1898, as follows, to wit:

DRY DOCK AT NORFOLK.—ATTEMPT TO BE MADE TO RESTORE ITEM IN APPROPRIATION BILL.

Norfolk, Va., March 20.—A strenuous effort is to be made to have restored to the naval appropriation bill the item providing for the construction of a dry dock at this navy-yard capable of holding battle ships and cruisers of the largest size. Naval officers stationed here say that delay in the matter or refusal on the part of Congress to provide the necessary docking facilities for the Hampton Roads naval rendezvous will simply place the largest vessels in our fleet at the mercy of the enemy in the event of hostilities. Repairs can not be made to the hulls of ships after a fight unless adequate dry-dock facilities are available. Congressman Young will make a strong fight for the restoration of the item. Officers are of the opinion that the present dry dock should be lengthened, if it is impossible to secure a new one.

* See naval appropriation bill, H. R. No. 9378, and House report thereon, No. 775, Fifty-fifth Congress, second session, reported to the House March 22, 1898.

But in reference to establishing a new dry dock at Norfolk, your attention is called to the recitals of said naval dry dock board on page 8 of Senate Doc. No. 107, Fifty-fifth Congress, second session, as follows, to wit:

Were the water approaches of a nature to warrant, the Norfolk Navy-Yard would be the proper location for such a dock, but the channel from the open water of Hampton Roads to the navy-yard is 10 miles long, through narrow and dredged channels, has a depth of but 25 feet at low water, and is so narrow that the accidental sinking of any large vessel in it would effectually block the fairway. The board is therefore of the opinion that Norfolk in its present condition is not a proper place for the largest type of dock required by the strategical importance of the location.

At Newport News are sufficient water and good conditions generally for a first-class floating dock, and at this place a steel double-sided combined floating and graving dock is recommended unless the channel from Hampton Roads to Norfolk be increased, concurrently with the building of the dock at Norfolk, to a width of 400 feet and a depth of 30 feet at mean low water, in which event the recommendation of the board is that the concrete graving dock referred to under "Norfolk Navy-Yard" be constructed.

From this recital it therefore fully officially appears, in order to secure at Boston, League Island, Mare Island, and Norfolk new dry docks of the standard requirements as recommended by said naval dry-dock board, that the channel approaches to all of said docks must be improved or bettered so as to secure an adequate width and depth of water continuously along such channels.

These conditions are identical with those existing in the case of the proposed dry dock at Round Bay, and therefore place said five-named places upon one and the same plane for Congressional consideration (all other things being equal), with this exception only, that the construction and establishing such a dry dock at Round Bay, while less in cost, would be a permanent object lesson to the students and post graduates of the United States Naval Academy.

I respectfully submit to you, in connection with the proposed dry dock at Round Bay, that some cognizance should be taken of the fact that at this time the honorable Secretary of the Navy, the honorable Speaker of the House of Representatives, the honorable Chairman of the Committee on Naval Affairs in both Senate and House, the honorable Chairman of the Committee on Ways and Means, the honorable Chairman of the Committee on House Rules (which committees outline and absolutely control the naval policy of our country during the Fifty-fifth Congress), are all from the New England States, while the State of Maryland is not represented on any one of said four important committees, which, in connection with said Secretary of the Navy, so largely designate and fix the exact localities at which so many millions of Federal money for ships, yards, docks, etc., shall now, and in the very near future, be duly expended. In evidence whereof see extract from New York Journal, March 22, 1898, as follows, to wit:

An important action was taken to-day by Secretary Long in reopening the Portsmouth (N. H.) Navy-Yard to naval work. This yard has been virtually closed ever since the war. The facilities there have been paltry. The present emergency has warranted an additional plant for the speedy repair of vessels of war. It was desired that there should be at least two yards on the New England coast which would accommodate disabled vessels. With this end in view, Secretary Long to-day directed the purchase, after calls for bids, of materials, such as tools and general supplies, to the extent of $20,000.

The *Essex* and the *Alliance*, of the older navy, will proceed at once to the Portsmouth yard and be extensively repaired. Secretary Long contemplated sending the *Machias* to Portsmouth also, but has abandoned this idea, and has ordered the *Machias* to the Boston yard.

A circumstance so anomalous, and a condition of national naval affairs so important as these would seem to be, should not, I respectfully submit, be permitted to go without some notice on the part of the delegation in Congress from Maryland.

If for no other reason, then, such notice should be taken because of the exceeding great value and importance to the nation, in peace and in war, of the Chesapeake Bay, the largest arm of the sea along our Atlantic coast, and also because of the present location of the United States Naval Academy (a national institution which should never escape your fostering care and zealous and immediate supervision), both of which are situated within the limits of the State of Maryland, facts which I respectfully submit are duly entitled to your highest consideration before the Fifty-fifth Congress.

When, therefore, the regular naval appropriation bill for the fiscal year ending June 30, 1899 (H. R. 9378), is under consideration in Congress, it is suggested that an amendment be duly proposed thereto covering all that which the general assembly of Maryland has petitioned Congress (as recited in said Exhibit No. 5).

I therefore respectfully submit to the serious consideration of the delegation in Congress from Maryland that if Congress shall finally ignore the very great advantages of the Chesapeake Bay when providing for new dry docks, or shall in its legislation generally on this subject exclude Round Bay as one of the sites selected whereat to establish such dry dock (notwithstanding the special advantages possessed by it as herein so fully demonstrated), then most surely such exclusion can but serve to emphasize the utterances of complaint heretofore so frequently made, and especially by the Baltimore Sun, in regard to the past and continuing "inequitable geographical distribution of the public moneys."

I therefore invite your attention to the declaration of this council, heretofore expressed on this same subject and recited on pages 42–45 in Senate Doc. No. 21, Fifty-fifth Congress, second session, which I deem of sufficient value and importance in these premises to here reproduce, and which is as follows, to wit:

INEQUITABLE DISTRIBUTION OF THE EXPENDITURE OF THE PUBLIC MONEYS OF THE UNITED STATES.

In conclusion this council respectfully invites special attention to the inequitable distribution of the expenditure of the public moneys during the thirty years last past; showing that the large expenditure for supplies for the Army, Navy, and civil service, for building ships, dry docks, manufacturing cannon, rifles, muskets, pistols, and guns generally, gun carriages, ammunition, ordnance and fortifications, maintaining shipyards, repairing ships, and for the construction of public buildings, and contracts for Government supplies generally, have been chiefly made in Northern and Northwestern States.

This matter has grown so grave that this council is of opinion that the time has fully arrived when the attention of Congress should be directed to the same, with a view of securing a more equitable distribution geographically of the expenditure of the public moneys.

The Baltimore Sun of September 29, 1897, makes reference to this subject generally in an editorial as follows:

"ARMOR PLANTS IN THE SOUTH.

"Now that it is universally conceded that iron and steel are produced more cheaply in the South than in any other part of the world, it is but right and proper that the proposed armor plant of the Federal Government should be located in Maryland, Alabama, or Tennessee. The South has been too much ignored in the distribution of the indirect benefits of Governmental expenditure. Taxes are collected in the South with great promptness, both internal taxes and tariff taxes paid on goods imported through Northern ports, or on domestic goods, whose price is enhanced by duties

laid for the benefit of Northern manufacturers. With like promptitude and readiness the outgoing current of money from the Federal Treasury should, as far as possible, be directed by the spending departments in equitable proportions to the sections from which it came. This has been recognized as respects the Pacific Coast and the Northwest, but not as respects the South.

"The interest of the Government is of course the first consideration. Contracts should go to the lowest bidder and Government plants should be located where they will give the best and most economical results. This is the correct general principle. It was not observed when it was provided in an act of Congress that more should be paid per ton for war ships built on the Pacific Coast than for those built at Baltimore, Norfolk, or Philadelphia, nor has it been observed in regard to other objects of expenditure. Favoritism has too often decided where contracts and Government plants shall go. Political "pulls" have for many years caused contracts for ships, guns, armor, ammunition, paper, and other supplies to go to certain Northern States. While it is true that the lower price should command contracts, there has not for many years been an impartial attitude toward contractors. The distribution of contracts has been distinctly geographical, sectional, and political, and at the same time decidedly inequitable. Even the manufacturing establishments operated by the Government have been inequitably distributed, all the important ones being located in the North. This has had its effect in delaying the industrial development of the South.

"The establishment by the Government of its plant for the manufacture of armor in the South would be strictly in accord with sound principles of economy. It would pay. Armor for war ships ought to be made by the Government in the South, because it can be more cheaply made there than elsewhere. This is a solid reason, which can not be ignored. If it could not be made there more cheaply than in the North, but only at the same price, still regard for the principle of equitably distributing Government expenditures would require a Southern location of the proposed plant. Much more when the South offers the advantages of economy and immunity from attack by sea. Alluding to the demand of Southern representatives that these advantages should now at length be given a tardy recognition, the New York Herald speaks at length of 'the great advantages possessed by these States in cheapness of coal, iron, labor, and transportation,' and the sentimental plea of 'the existing discrimination against the South in the establishment of Government institutions, notably of such as are related to the necessities of naval defense.'

"The Herald thinks that 'the steel workers reared in the North will not like the proposed sites in the South,' but the Herald should consider that the preferences of the Northern steel workers are not the main consideration. It forgets also that few of the steel workers at existing plants in Pennsylvania are Americans, but are imported from foreign countries. These imported workmen would as readily go to Alabama as to Pennsylvania; and experience shows that Northern workers have no aversion to good jobs in large private plants now operated in the South."

Certain references to dry docks were made March 24, 1898, on the floor of the House of Representatives while the naval appropriation bill (H. R. 9378) was being debated which, unexplained, do not fully or exactly harmonize with other references made in regard to the same subject recited in the reports of the Secretary of the Navy and of the naval dry-dock board (which latter report in said debate was declared to be "purely advisory").

For the purpose of comparing said recitals or references with those on dry docks contained in Exhibits 2 and 3 herewith, an extract from page 3502 of the Congressional Record of March 24, 1898, is therefore now submitted herewith, as follows, to wit:

Mr. BOUTELLE of Maine. I am humiliated to find that I have occupied the attention of the committee for this length of time, when I only intended to speak a very few minutes.

Mr. Chairman, I perhaps ought to make a reference to two other features of this bill. One of them is the matter of dry docks. The Secretary of the Navy in his annual report made certain specific recommendations of the very great importance of additional dry-dock facilities. In my own judgment there was some exaggeration in the statement that found utterance in the press last year as to the failure of Congress in the past to do its duty, because if the great docks that we had authorized had been properly constructed certain difficulties that did arise would not have occurred.

But it is too late to go back now and hunt for last year's birds' nests. The Secretary of the Navy has earnestly recommended the authorization of additional docks.

That those docks will be required in the future is more obvious now than it was six months ago. There are a great many more people in this country to-day who are reconciled to the idea that we must maintain a reasonably strong Navy than there were a year ago or perhaps six months ago.

The Committee on Naval Affairs have taken under consideration all of these recommendations, and after a long period of hearing by the subcommittee, of which the gentleman from California [Mr. Hilborn] is the chairman, they have recommended to the full committee and the full committee indorsed the provisions which are now in this bill for the erection of a dry dock at Portsmouth, N. H., where there is no dock now; for the erection of a new dock at Boston, where there is only an inferior and undersized stone dock; for the erection of an additional dock at League Island, Pa., our only fresh-water yard, unless Mare Island is called a fresh-water yard—the only fresh-water yard on the Atlantic coast.

Mr. BUTLER. The only fresh-water yard on any coast.

Mr. BOUTELLE of Maine. My friend from Mare Island will not admit that the water is brackish there, where they have not a dock large enough to take in our largest battle ship. Mare Island is 900 miles from Port Orchard, where we built a dry dock some years ago; and for the construction of a steel floating dock at Algiers, La., opposite New Orleans, there being no facility of any kind now anywhere along the Gulf coast.

Members will find the recommendations of the Department in the annual report, and the committee have deemed it wise to make to the House these recommendations for additions in that regard.

Mr. BROMWELL. Are all of these proposed docks of sufficient capacity to dock our largest war vessels?

Mr. BOUTELLE of Maine. I will say to my friend from Ohio that we have been somewhat disappointed in the construction of some of these docks in the past, and that we labored to get the wording of this bill in such shape that it will prevent the possibility of building a dock anywhere hereafter that shall not be calculated to meet the requirements of our largest vessel. The wording in the bill is:

"Said dry docks to be not less than 700 feet in length, and of other dimensions sufficient to meet the present and probable future requirements of the largest vessels of the Navy and auxiliary fleet."

Mr. BENNETT. Will the gentleman allow me to ask him a question?

Mr. LEWIS of Washington. Will the gentleman permit me to suggest——

Mr. BOUTELLE of Maine. I will answer one gentleman at a time. I yield to the gentleman from New York [Mr. Bennett].

Mr. BENNETT. Was the recommendation of the committee appointed by the Navy Department a short time ago to report to Congress on the selection of location of dry docks—was that taken into consideration by the Committee on Naval Affairs?

Mr. BOUTELLE of Maine. I understand it was exhaustively considered by the subcommittee and the full committee.

Mr. BENNETT. Were any of those places selected by the Naval Committee?

Mr. BOUTELLE of Maine. Why, yes; nearly all of them. The only one, I think, was League Island——

Mr. BENNETT. What was the recommendation of the board?

Mr. BOUTELLE of Maine. In regard to League Island?

Mr. BENNETT. Yes.

Mr. BOUTELLE of Maine. They made no recommendation.

Mr. BENNETT. They made no recommendation for the Pacific coast?

Mr. BOUTELLE of Maine. But the gentleman must understand we were not necessarily governed by that report. It was purely advisory.

Mr. BENNETT. I was simply asking for information, to see whether that report had had any weight with the Committee on Naval Affairs or not.

Mr. BOUTELLE of Maine. My understanding is, I will say, that everyone of these docks except one has been authorized in this bill according to the recommendations of the Bunce board.

Mr. LEWIS of Washington. I will suggest to the gentleman from Maine, the chairman of the committee, the gentleman from Ohio asked whether these docks will accommodate the large war vessels we have.

I desire to remind the honorable gentleman that the dry dock at Port Orchard, within my district, is able to accommodate the largest vessels we have in the Navy. It has lately accommodated the *Oregon* with perfect ease and complete facility. I take the liberty to make the suggestion, lest it may have escaped the honorable gentleman at the time the question was asked.

Mr. BOUTELLE of Maine. I am simply speaking of the additional docks.

Mr. LEWIS of Washington. I thought it might have escaped the gentleman's attention.

Mr. BOUTELLE of Maine. The dock at Port Orchard is a large and admirable dock, and further provision is made for it in this bill.

Mr. JOHNSON of Indiana. And it is in the gentleman's district.
Mr. BOUTELLE of Maine. And an additional recommendation is the fact that it is ated in the gentleman's district. [Laughter.]
Mr. LEWIS of Washington. I have no doubt that that dock has derived much nefit from the fact that it is in my district. [Laughter.]
Mr. BOUTELLE of Maine. Now there is one other topic I wish to refer to. That is matter of armor. We have debated that——
Mr. ROBBINS. Before you leave the question of dry docks, I desire to ask you a stion.
Mr. BOUTELLE of Maine. This whole matter will be discussed under the five-minute on these items.
Mr. ROBBINS. I know.
Mr. BOUTELLE of Maine. I am only making a preliminary statement.
Mr. ROBBINS. What I wanted to know is the necessity for the dock at Portsmouth, ear the dock at Boston?
Mr. BOUTELLE of Maine. Great Britain has a dozen docks in one yard. The reason place is provided is because we have a very extensive plant of over a million ars invested in machinery and facilities for complete repair of ships that has invested during the last fifty years, and that a dry dock is an essential part of vy-yard; and also, I presume, more or less based on the fact that experts in tegy have held for many years that the seat of a foreign war on the ocean would ikely to locate itself somewhere off the New England coast or between Gardi- Bay and Halifax, and also that there is a great depth of water there.
ou must remember that the United States coast is of a very peculiar conforma- . I do not know how many gentlemen of this House may have had themselves ight into a recognition of the fact that from New York Harbor, from the Jersey h, Long Branch, and all the way along the coast of the United States to Gal- on Harbor there is such a uniform conformation of the shore that a man would to be very expert when landed in the night to be able to tell where he was. n Bascom down to near Galveston it is a shoal sandy beach all along our coast, our harbors as we go south suffer in depth of water.
he deepest water is off the coast of the Northern States, where the coast is rock nd and the openings to the harbors deeper. In my district, which runs down ard the Bay of Fundy, we have a rise and fall of tide, in some places, of 30 feet, ch furnishes harbors that can give any depth required. Portsmouth has more th of water, and Portland, Me., gives an unrivaled harbor as to depth. As you outh, the depth of water decreases.

The manner in which other governments have heretofore utilized and still utilizing the great arms of the sea or magnificent bays within ir own limits for defensive purposes—going so far, in fact, as to con- t such great bays by means of gigantic canals—should teach a lesson our Government to be learned with profit, a lesson which should be plied at this time not only to this case, but which may hereafter be o applied to connect by a canal the Chesapeake and Delaware bays— roposition frequently referred to by this council in Senate Ex. Doc. . 21, Fifty-fifth Congress, second session; and it is for this reason I w invite your attention to one of the latest propositions of the Rus- n Government, to wit, to connect the Baltic and Black seas by a antic canal to be traversed by its battle ships, and as recited in a morandum submitted herewith in said appendix and marked xhibit No. 40." Other exhibits from the Army and Navy Register of rch 12, 1898, and Washington Post, March 9 and 14, and Washington st of March 16, 1898, are submitted herewith (Exhibits Nos. 46, 47,

n conclusion, the suggestion is also respectfully submitted that an endment might be submitted, either to the regular naval appropria- n bill (H. R. 9378) or to one of said two dry dock bills of the form w submitted herewith (Exhibit No. 41), so as to fully include the two positions of the improvement of the Severn River and constructing ry dock thereon at Round Bay, as recited in S. 2778. I am confi- t that I reflect not only the views of this council, but also the views he people generally of this State, as embodied in the aforesaid joint olution and memorial to Congress of the general assembly of Mary-

land (Exhibit No. 5), in declaring that the matter of improving the Severn River and locating a dry dock thereon at Round Bay is entitled to your highest consideration, and I sincerely trust that the evidence of the appreciation of these two national works (both wholly within the limits of this State) of the delegation now in Congress from Maryland will be best shown to our people by the passage of some separate bill or by an amendment to the regular naval appropriation bill (H. R. 9378) during the second session of the Fifty-fifth Congress, such as will secure to this State and to the nation so commendable a public measure as the one contained in Senator Gorman's said Senate bill No. 2778, when duly amended as herein suggested in Exhibit No. 41 and in the herewith proposed amendment to H. R. No. 9378.

I am, sirs, yours, very truly and respectfully,

RICHD. H. GREEN,

Mayor of the City of Annapolis, State of Maryland.

EXHIBIT No. 1.

[Senate Document No. 21, Fifty-fifth Congress, second session.]

Mr. GORMAN presented the following

SOLUTIONS OF THE MAYOR, COUNSELOR, AND ALDERMEN OF HE CITY OF ANNAPOLIS, MD., IN FAVOR OF AN APPROPRIA-ION FOR THE IMPROVEMENT OF THE SEVERN RIVER, IN THE TATE OF MARYLAND.

ANNAPOLIS, MD., *October 15, 1897.*

EAR SIR: In accordance with resolution of mayor, counselor, and ermen of the city of Annapolis, I have the honor to transmit this to you a copy of certain resolutions by them passed, together with port in support thereof, to which you are respectfully asked to give r prompt, full, and favorable consideration.

I am, sir, yours, very truly,

P. E. PORTER, *Clerk.*

Hon. A. P. GORMAN,
United States Senator.

RESOLUTIONS.

Whereas the great want of adequate facilities for docking United tes naval vessels at all times and at convenient places in the United tes has become so evident to the public that the proper naval thorities of the United States were compelled to send the United tes battle ship *Indiana*, in August, 1897, to a British dry dock at lifax, Nova Scotia, to be there docked for due examination and terment (if needed); and

Whereas it has been reported that a project is now being considered a board of United States naval officers regarding the general sub-t-matter of additional naval docking facilities, with a view of sub-ting an official report thereon to Congress at its next session, which ject may no doubt involve not only a proposition to enlarge certain he existing United States dry docks, but also the advisability and essity of establishing new dry docks either at the sites of said ting dry docks or at other, different, and it may be, equally advan

tageous if not (geographically) better, localities within the jurisdiction of the United States; and

Whereas Round Bay, at the head of Severn River, State of Maryland, an arm of the Chesapeake, the most magnificent and capacious of all bays along the Atlantic coast from Maine to Florida, furnishes, in the opinion of this council, a suitable—in fact, an admirable—location whereat to establish and construct a new naval granite dry dock and also other needed public works in connection therewith, and which works (all or some) could be duly constructed while the channel of the Severn River from Chesapeake Bay to Round Bay is being properly straightened and widened to 150 feet and deepened to 30 feet at mean low tide, and all of which improvements this council respectfully submits should be duly provided for by Congress at its next session: Therefore, be it

Resolved by the mayor, counselor, and aldermen of the city council of Annapolis, Maryland, as follows, to wit:

First. That the Senators and Representatives now constituting the delegation in Congress from the State of Maryland be, and they are hereby, respectfully requested to urge upon Congress to make an appropriation of money at its next session sufficient in amount to improve the harbor of Annapolis and the channel of the Severn River, Maryland, so as to secure from Chesapeake Bay, via said river to Round Bay, a continuous ship channel of not less than 150 feet wide at the bottom, with side slopes 1 on 3, and 30 feet deep at mean low tide, and for the construction in Round Bay of a naval granite dry dock, with dimensions capable of docking any United States naval vessel of the maximum number of tons displacement now built or contemplated to be built, with a tidal basin of 1,000 feet square and 30 feet deep in connection therewith, and the due establishment on said Round Bay of other public works, such as the needs of the public service now or may seem to soon demand; and in support of the several matters herein petitioned for, this council respectfully submits herewith a report and makes the same a part of this their memorial to Congress in these premises.

Second. *Be it further resolved*, That the clerk of this council be, and he is hereby, directed to transmit (through its senior Senator) a copy of these resolutions and of this report, addressed to each Senator and Representative of the delegation in Congress from Maryland, with the respectful request of this council that all of same be duly laid before Congress at the earliest date possible for its proper and mature consideration and favorable action during its next session.

Third. *Be it still further resolved*, That in view of the great public interests involved in these several propositions said clerk be, and he is also hereby, directed to transmit a copy of these resolutions and o this report to the governor of this State, with the respectful request of this council that the governor may be pleased to duly lay the same before the legislature at its next session, accompanied with such favorable recommendation in relation thereto as he may deem to be proper, appropriate, and pertinent in all these premises.

October 5, 1897.

Adopted by the mayor, counselor, and aldermen of the city of Annapolis, State of Maryland.

P. E. PORTER, *Clerk.*

IMPROVEMENT OF ANNAPOLIS HARBOR AND SEVERN RIVER AND CONSTRUCTING A GRANITE DRY DOCK IN ROUND BAY, STATE OF MARYLAND.

Communication from the mayor, counselor, and aldermen of the city council of Annapolis, Md., relative to straightening, widening, and deepening the channel of Annapolis Harbor, so as to obtain a continuous ship channel 150 feet wide and 30 feet deep at mean low water from Chesapeake Bay to Round Bay, via the Severn River, State of Maryland, and the establishment of certain public works on said Round Bay, at the head of said river, submitted in support of their resolutions and memorial to Congress in relation thereto as follows, to wit:

Whereas the great want of adequate facilities for docking United States naval vessels at all times and at convenient places in the United States has become so evident to the public that the proper naval authorities of the United States were compelled to send the United States battle ship *Indiana*, in August, 1897, to a British dry dock at Halifax, Nova Scotia, to be there docked for due examination and betterment, if needed; and

Whereas it has been reported that a project is being now considered by a board of United States naval officers regarding the general subject-matter of additional naval docking facilities, with a view of submitting an official report thereon to Congress at its next session, which project may no doubt involve not only a proposition to enlarge certain of the existing United States dry docks, but also the advisability and necessity of establishing new dry docks, either at the sites of said existing dry docks or at other, different, and, it may be, equally advantageous, if not (geographically) better, localities within the jurisdiction of the United States; and

Whereas Round Bay, at the head of Severn River, State of Maryland, an arm of the Chesapeake, the most magnificent and capacious of all bays along the Atlantic coast from Maine to Florida, furnishes, in the opinion of this council, a suitable—in fact, an admirable—location whereat to establish and construct a new naval granite dry dock, and also other needed public works in connection therewith, and which works (all or some) could be duly constructed while the channel of the Severn River from Chesapeake Bay to Round Bay is being properly straightened and widened to 150 feet and deepened to 30 feet at mean low tide, and all of which improvements this council respectfully submits should be duly provided for by Congress at its next session: Therefore, be it

Resolved by the mayor, counselor, and aldermen of the city council of Annapolis, Md., as follows, to wit:

First. That the Senators and Representatives now constituting the delegation in Congress from the State of Maryland be, and they are hereby, respectfully requested to urge upon Congress to make an appropriation of money at its next session sufficient in amount to improve the harbor of Annapolis and the channel of the Severn River, Maryland, so as to secure from Chesapeake Bay, via said river, to Round Bay a continuous ship channel of not less than 150 feet wide at the bottom, with side slopes 1 on 3, and 30 feet deep at mean low tide, and for the construction in Round Bay of a naval granite dry dock, with dimensions capable of docking any United States naval vessel of the maximum number of tons displacement now built or contemplated to be built, with a tidal basin 1,000 feet square and 30 feet deep in con-

nection therewith, and the due establishment on said Round Bay of other public works, such as the needs of the public service now or may seem to soon demand, and in support of the several matters herein petitioned for this council respectfully submits herewith a report and makes the same a part of this their memorial to Congress in these premises.

Second. *Be it further resolved*, That the clerk of this council be, and he is hereby, directed to transmit (through its senior Senator) a copy of these resolutions and of this report, addressed to each Senator and Representative of the delegation in Congress from Maryland, with the respectful request of this council that all of same be duly laid before Congress at the earliest date possible for its proper and mature consideration and favorable action during its next session.

Third. *Be it still further resolved*, That in view of the great public interests involved in these several propositions said clerk be, and he is also hereby, directed to transmit a copy of these resolutions and of this report to the governor of this State, with the respectful request of this council that the governor may be pleased to duly lay the same before the legislature at its next session, accompanied with such favorable recommendation in relation thereto as he may deem to be proper, appropriate, and pertinent in all these premises.

Adopted October 5, 1897.

RICHARD H. GREEN, *Mayor.*
ROBERT MOSS, *Counselor.*
JOHN H. BRIGHT, Jr., *Alderman.*
ELMER E. PARKINSON, *Alderman.*
WEEMS REDOUT, *Alderman.*
JOSEPH H. BELLIS, *Alderman.*
HERMAN ELLINGHAUSEN, *Alderman.*
WILEY H. BATES, *Alderman.*

COUNCIL CHAMBER,
Annapolis, Md., October 5, 1897.

Hon. A. P. GORMAN,
Hon. GEORGE L. WELLINGTON,
United States Senate,
and
Hon. WILLIAM B. BAKER,
Hon. ISAAC A. BARBER,
Hon. WILLIAM S. BOOZE,
Hon. JOHN MCDONALD,
Hon. WILLIAM MCINTIRE,
Hon. SYDNEY E. MUDD,
House of Representatives,
Constituting the delegation from the State of Maryland in the Fifty-fifth Congress, second session.

SIRS: Whereas the mayor, counselor, and aldermen constituting the city council of Annapolis, Md., learn that the river and harbor act of Congress which became a law on the 3d day of June, 1896, contains a provision authorizing the Secretary of War, under the supervision of the Chief of Engineers, to cause a survey to be made of the channel at the entrance to the harbor at Annapolis, Md., and which authorization and the objects thereof are contained in words as follows:

Annapolis Harbor: With a view to straightening, widening, and deepening the channel of the entrance to said harbor so as to obtain a ship's channel of one hundred

d fifty feet wide and twenty-eight feet deep at mean low water from Chesapeake y to the wharves of the United States Naval Academy in said harbor.

And whereas this council also learn that under orders duly issued om the War Department, through the office of the Chief of Engineers, structing and directing said survey to be made, that a report in refer- ce to to said matters, dated December 4, 1896, was duly submitted to e honorable Secretary of War, and by him on December 9, 1896, ansmitted to Congress and printed as House Document No. 57, Fifty- urth Congress, second session; and

Whereas among other matters contained in said document this coun- calls special attention to such of the report of the United States gineer officer making the same as is recited in words as follows:

An accurate survey of this harbor was made in 1878 under the direction of Capt. mes M. Cuyler, Corps of Engineers, and another in 1888 by the United States ast Survey Office. The Coast Survey chart, based on the latter survey, has been ought up to date—1896.

With these excellent charts available, it was not considered necessary to make an ditional survey, but merely an examination with a view to obtaining such infor- tion not contained in the charts as might be necessary for a proper consideration the subject.

The earliest report in reference to the improvement of this harbor was made by pt. Charles B. Phillips, Corps of Engineers, October 30, 1876. A portion of his ort in reference to the shipping is quoted, because it is the same to-day as it was enty years ago:

"I find three classes of shipping interested in the navigation of the water proaches to Annapolis: (1) Vessels (mainly of light draft) running regularly to d from the port and carrying the local commerce of the city; (2) coasting and ster vessels, which use the harbor solely as a point of refuge from ice and inclem- t weather; (3) deep-draft United States naval vessels."

The next report was made January 4, 1879, by Captain Cuyler, in conjunction with s survey of the harbor. He submitted a project for a 24-foot channel, and his con- usions were as follows:

"If the analysis of existing conditions there as given above be correct, consider- g the present demands of commerce on this harbor, the method to be pursued to tain the object held in view would seem to me to be that of dredging. It is lieved the character of this would be favorable, and, for the reasons above quoted, it small periodical repairs would be required for a channel once so made.

* * * * * * *

"With the dredging of the proposed channel should go on works for the protec- on from further abrasion of Greenberry Point to stop the filling in across from it the made channel, and later on of Horn Point.

"It is not considered advisable to recommend the a loption of any other system of improvement—such, for example, as jetties—to confine the volume of the in and out- ard flow to produce scour; certainly, at least, to begin with.

"Jetties, to be effective here, would require a location involving great extent, and, om the exposure, much solidity in construction, so giving a large first cost. It is estionable also whether, if properly placed, jetties might not seriously interfere ith the facilities now enjoyed, and which would be required to a greater extent ill in case of an improvement being made here by navigation."

These reports were followed on June 14, 1880, by an appropriation of $5,000 and a w directing an examination of the "bars at the entrance of Annapolis Harbor, th a view to ascertain the character of jetties necessary to render the proposed provement permanent."

This additional examination was made in October, 1880, by Mr. W. R. Hutton, der the direction of Maj. William P. Craighill, and the following is quoted from e former's report:

"I conclude that the new channel should be laid in a straight line from the closed foot curve between Greenberry and Horn Point bars to that point on the 24-foot rve outside where it turns from the shore to pass around the reef off Tolleys Point. confine this channel between two jetties would be injurious by obstructing the linary navigation of the harbor.

"A single jetty on the south side would confine the current more closely and would ter maintain the channel. Its length would be very great and its cost out of portion to the benefits to be obtained. A channel dredged on the line I have cribed would, in my judgment, maintain itself.

* * * * * * *

"Some dredging will doubtless be required in course of time, but it will b
much cheaper than any works to maintain the channel by scour."

An additional appropriation of $5,000 for this locality was made in March, 1

The estimated cost of the improvement was $66,000. As the expenditure of $
would not effect any substantial improvement, it was not deemed expedient t
mence operations until further directions were received from Congress. F
mendation to that effect to the Chief of Engineers was approved April 7, 188
work was done until toward the close of 1885, when information was receive
shoaling had taken place in some portions of the harbor and the freedom of n
tion thereby impaired. This was in the vicinity of the Naval Academy wl
and the work was put under contract and completed in August, 1886, for the
$7,244.41. The unexpended balance of the $10,000 was repaid into the Treasu

On October 19, 1896, I proceeded by tug to Annapolis and made the required
nation. The harbor of Annapolis runs southeast to northwest, with a fairly st
ship channel through it 19 feet deep at mean low water. Opposite the Naval Ac
wharves there is a deep pocket with a minimum depth of 29 feet, which e
thence to a point due south of the wharf of the naval ordnance proving g
This deep water is separated from the deep water of the bay by two broad bars,
in turn are separated by a deep-water pocket with 25 feet of water in it. The
is caused by Greenberry Neck, which projects into the harbor and causes a co
tion of the waterway. Greenberry Neck is wearing away very rapidly, probs
the rate of 15 feet a year, 30 feet or 40 feet having disappeared in two recent s
according to the light-house keeper; consequently, its influence on the channe
sening each year. As the deep-water pocket now caused by it is only 25 feet
it is thought that in the consideration of a 28-foot channel its influence may
regarded and the whole obstruction regarded as a single bar about 3 miles br

If the jetty system were applicable to the improvement of this harbor it mi
well to prevent the further abrasion of this neck of land and use it as the st
point of a north jetty, but the excessive cost and the great obstacle they woul
to small-craft navigation prohibit jetties. Consequently, it is not considered
essary part of the improvement of this harbor to protect Greenberry Neck.

Dredging, then, presents itself as the only available means of deepening th
channel across the bar. To determine the character of the bottom, sounding
made along the most direct route between the deep-water pocket opposite the
Academy and the 28-foot contour of the bay, advantage being taken of the
water pocket off Greenberry Point. This channel line is not straight, havin
deflection angle in it of about 20 degrees. It also joins the deep water of the S
obliquely, making another turn of about 30 degrees. The 20-degree turn c
reduced to 8 degrees by turning the outer portion southward and running it
and parallel to the Tolley Point bar. This position was indicated by Mr. Hut
his report. Its disadvantage lies in the fact that it will require a channel on
mile longer than the other, but this, it is thought, will be compensated for b
greater ease in maintaining it, the Tolley Point bar acting in the manner of a
ing wall.

The soundings were taken with a lead line and the bottom tested by an iro
The average mean low-water depth along this line is about 20 feet, but the b
is so soft that the mere weight of the iron rod, when dropped from a height of
or 4 feet, was sufficient to send it 8 feet or 10 feet into the mud. The only e
tions were at points where oyster beds were encountered, and here a slight t
would send the rod through this upper crust. The mean rise of the tide is on
foot, and the direction and velocity of the tidal currents are very much affect
the wind—a strong southerly wind sending the flood tide almost due north un
shoals off Hacketts and Greenberry points deflect it into the harbor. On th
trary, on a calm day the tide follows the channel course. For this reason the
ebb and flow would have little influence in maintaining a dredged channel.

On the other hand, the drainage area of the Severn River is comparatively
and the banks well protected, so it is thought that but little sediment is carrie
the harbor. There is, however, a tendency to shoal in the vicinity of the Naval
emy wharves, and this, in the opinion of the superintendent of that institut
caused by sediment brought down by Dorsey Creek. The deposition is cause
tially by the junction of Severn River and Dorsey Creek, and partially by the S
Wharf, which acts as a groin and prevents the sediment from being carried in
harbor. In some places near the Santee Wharf the depth has been reduced fr
feet to 12 feet in the last few years.

In order to form a correct idea of any changes that may have taken place
harbor, a comparative chart was prepared from the records of this office. Fou
cipal charts were consulted. One, dated 1819, was made by Jonathan W. Sherl
United States Navy; one, dated 1878, was made under the direction of Capt.
W. Cuyler, Corps of Engineers, and the other two were Coast Survey charts,
1844 and 1893. A study of this chart indicates that few changes have taken pl

hat part of the harbor known as Annapolis Roads, while in the inner harbor the ship hannel appears to be growing narrower, due, no doubt, to the wearing away of Horn nd Greenberry points, but the condition is almost one of permanence, extending ver a period of seventy-seven years.

A dredged channel through such soft material would require easy side slopes, say ne-third, and a certain amount of annual dredging for maintenance, but all who ave ever examined this harbor agree in recommending dredging as the proper eans of improvement.

I would recommend that the outer portion follow a line parallel to the Tolley 'oint bar, leading 35 degrees west of north. This would make a cut 3¼ miles long, nd, with side slopes of one-third and an allowance of 1 foot for filling in behind he bucket, would require 1,070,000 cubic yards of excavation, scow measurement, or ,070,000 cubic yards, at 12 cents per cubic yard, $128,400.

Wherefore, in view of said recitals in said report, and in support of heir foregoing resolutions and memorial to Congress, now transmitted o it through you, this council desire to respectfully submit, briefly, an xpression of their views as to the needs of navigation of said river nd harbor, and in its opinion some of the reasons why the due and arly execution of the improvements recited herein and in part contemplated by said extract from said river and harbor act should be avorably urged upon and recommended by you to Congress at its next ession.

The harbor of Annapolis (the capital of Maryland, one of the thirteen riginal States of the Union) is situated on the west side of Chesapeake Bay—a large arm of said bay—on and at the mouth of the Severn River, where is located the United States Naval Academy, on the site of the old military Fort Severn, in latitude 38° 59′ north, longitude 76° 27′ 15″ west.

The entrance of the channel of said harbor from Chesapeake Bay, at a point where its water is 30 feet deep at mean low tide, is situated between Greenbury Point on the north and Horn Point on the south; over which channel, while the water in places is 23, 24, and 25 feet deep, yet it is only 20 feet deep at mean low tide, and is less than 2 miles long, as will more fully appear from a chart of said channel and harbor, No. 385, made by the United States Coast and Geodetic Survey.

This harbor extends northwestwardly from the entrance of said channel for a distance of 10 to 12 miles to and including Round Bay, with a depth of water averaging about 21 to 23 feet along this entire distance to and including Round Bay, as will more fully appear from a chart thereof, No. 135, also made by the United States Coast and Geodetic Survey.

The only natural obstacle heretofore and now still existing preventing said harbor from enjoying the maximum advantages due its admirable location in relation to our vast fields of production, our inland lines of transportation, our coastwise and foreign trade, and the excellent anchorage ground within its capacious waters, is the want of an adequate uniform depth of water over said channel, and which channel this council respectfully submits should have a depth of water of not less than 30 feet, a width of not less than 150 feet at mean low tide, and be duly and properly straightened. To secure the costs of part of said results was the primary object of said survey of said channel as recited in said river and harbor act.

While the water of said channel has a mean depth of 20 feet at mean low tide (though in places, as aforesaid, it is 23, 24, and 25 feet deep), yet it would seem that the surface material to be removed so as to receive such uniform depth—30 feet—is free from rock and is mostly soft clay, mud, and marl, in consequence of which the cost of removal thereof may possibly be reduced to a minimum; and it is believed that

once said channel is dredged to receive a depth of water of 30 feet that the present conditions of the Severn River and harbor are such that said depth will be ever maintained, with no appreciable cost thereafter, the Severn River having little or no current, and both its banks being well protected by forest and vegetable growth, unless said conditions should change.

The tides in this harbor rise from 1 to 2 feet on an average daily, though the extraordinary tides rise at times in the spring from 6 to 8 feet.

The anchorage in this harbor is most excellent, the holding ground being stiff mud and clay, mixed more or less with marl and oyster shells, in which anchors can be held by short chains, and once embedded, sink to sleep amid all sorts of weather and without dragging.

The prevalent winds in this harbor are from southwest to northwest, and while the southeast wind along the Atlantic coast is generally the most destructive to all shipping, yet even this wind becomes a fair wind up the Chesapeake Bay.

This harbor is excellently landlocked by Greenbury on the north and Horn Point on the south; and it matters not from what point of the compass the winds blow, this harbor is always securely sheltered, and never is it the scene of wrecks or of great maritime damage.

Whatever the cause therefor may be, the fact is that while the southwest, northeast, and northwest winds are found to be more or less destructive elsewhere, even along other points of the Chesapeake Bay, they seem to pass over and above this harbor, leaving its waters comparatively placid, rendering this in fact the most completely protected harbor between the capes of the Chesapeake and the mouth of the Susquehanna River, which empties into said bay at its head.

This harbor is also noted for enjoying the very great advantage of eing at all times nearly free from ice, rendering it, even in the past, a valuable harbor of refuge for vessels drawing not over from 15 to 17 feet of water; so much so, in fact, that it is no unusual sight in winter, when the upper Chesapeake, including the harbor of Baltimore, is blocked with ice, to see a numerous fleet of heavily-laden vessels safely and snugly lying at anchor in this harbor and in the bay outside thereof, waiting for the ice blockade to raise in order to continue their voyage to Baltimore from distant and often from foreign ports; and many times during said ice blockades passenger and freight steamers plying between Baltimore and other ports have been compelled to land in this harbor and use rail thence to Baltimore, their original port of destination.

These ice blockades, come when they may, are always serious and injurious, and often very destructive to commerce, and no one can safely predict the times of their coming or their severity or the periods of their duration.

The latter, however, may be safely, fully, and exactly measured by referring to the fact that the upper Chesapeake at the Susquehanna River has been frozen so hard and thick as to bear in safety the heavily laden cars of the Baltimore, Wilmington and Philadelphia Railroad for almost an entire winter, prior to the completion of the present railroad bridge across the Susquehanna River, and during those periods the harbor of Baltimore becomes blockaded by ice, rendering its breakage and removal a matter of no small expense to the city of Baltimore.

It may safely be asserted that the loss and destruction of property to commerce by vessels of deep draft seeking in winter a safe port of refuge, due to such ice blockade, to say nothing of loss of life, have been more in money in a single ice blockade than the total cost of this proposed improvement.

This ice factor in the problem of said improvement, this council respectfully submits to you, will, when fully considered, be found to be one of no inconsiderable value and importance, and because it is right to assume that the occurrences of the past, the result of natural laws, and for which there is no avoidance or remedy, are liable to recur in the future, and hence precaution and prudence alike conspire to suggest that it were wise, if for no other reason, to have this harbor fully and properly improved in the manner herein prayed for and recited, and thereby become an important and valuable alternative harbor to that of Baltimore, and in the best interests of all the public in peace and war.

In evidence of how terribly destructive to life and property a northeast storm can be, and what terrific havoc it can create along our Atlantic seacoast, this council invites attention to the copious extracts from the Baltimore American, Baltimore Herald, and Washington Star, reciting some of the many disasters of the northeast hurricane of September 29, 1896, which proved quite harmless in this harbor, as printed in Senate Document No. 108, Fifty-fifth Congress, first session.

When our Atlantic Coast was visited by said severe northeast storm, doing more or less damage along our entire Atlantic Coast from Maine to Florida, during the entire gale, storm, and almost hurricane the harbor of Annapolis did not suffer any damage or sustain any pecuniary loss therefrom; but, on the contrary, to it steam-towed vessels and others, to avoid the effects of said northeast storm, to the number of forty vessels or more, sought and made this harbor their "harbor of refuge," as the following extract from the Baltimore Morning Herald of October 12, 1896, will more in detail confirm:

IN ANNAPOLIS HARBOR.

Annapolis, October 11.—Forty vessels have anchored in this harbor for refuge from the threatened storm, among them the steam barge *Julia S. Taylor*, of Wilmington, Del., loaded with piles, from the Choptank River and bound to New York. The *Taylor* left her moorings here this morning and started up the bay, but found the weather so rough outside she had to return to the harbor. The captain estimated the wind blowing off Annapolis at the rate of 25 to 30 miles an hour.

Other extracts from the public press of current dates, reciting the havoc created along the Atlantic Coast, were submitted as exhibits in Senate Document No. 108, Fifty-fifth Congress, first session, confirmatory of the declaration of this council in the report so heretofore by them made "in re the harbor of Annapolis," substantially to the effect that during the severe southeast and northeast storms along our Atlantic Coast this harbor is not only left comparatively harmless, but is, in fact, sought and made a "harbor of refuge," even under existing condition, for all vessels which can cross the bar or channel of this harbor and make anchorage therein. And this council respectfully submit that, were said channel deepened to 30 feet and widened to 150 feet, similar advantages might accrue to a class of vessels drawing a greater depth of water.

THE UNITED STATES NAVAL ACADEMY.

The United States Naval Academy, now permanently established in this harbor, was located here by the honorable Secretary of the Navy, Hon. George Bancroft, over half a century ago, to wit, in 1845, at which time, and thence to a very recent past date, this harbor answered fairly well for the easy entrance and exit of such United States vessels of war as were needed for all public purposes at said Academy or otherwise.

But since the date when the United States Naval Academy was first here established, on October 11, 1845, the ships of war and of commerce

have far outgrown the standard then deemed satisfactory for the respective wants and designs of each.

This changed condition is particularly applicable to the draft of such vessels rendering it both necessary and obligatory that harbors, their channels and entrances, must duly accommodate themselves to the larger dimensions, drafts, and corresponding greater wants and demands of maritime and naval structures. In fact, nearly all the wants of the United States Naval Academy itself have far outgrown its present maximum capacities; so much so, indeed, that the Board of Visitors to said academy in 1895, acting through one of its members, Hon. J. D. Sayers, then and now a Member of Congress from Texas, recommended to the Secretary of the Navy that he should appoint a commission of five naval officers to carefully examine and fully report a plan of general reorganization and rehabilitation of said Academy, its buildings, grounds, conveniences, etc., so as to be the better suited to present conditions, etc. Such a commission was so duly appointed, which made its report to the honorable Secretary of the Navy, which report has been printed as Senate Document No. 288, Fifty-fourth Congress, first session, and it estimated that said new plan will cost $6,000,000, more or less.

So valuable a naval plant, once perfected (whenever in the opinion of the proper authorities the same becomes necessary), should be reached by any of our vessels of war of the most modern standard and deepest draft.

During the three years last past the United States white squadron, under Rear-Admiral Walker, unable to reach said academy wharves, was compelled, for want of a proper depth of water, to anchor outside the harbor, in the Chesapeake Bay, 2 or 3 miles distant.

Again, when the French fleet visited America two years ago, more or less, and it also desiring to reach the United States Naval Academy wharves, was compelled to anchor at the same place in Chesapeake Bay for want of an adequate depth of water over said bar in said channel, the removal of which will enable not only our vessels of war but of commerce to enter said harbor and anchor therein, or be moored at the wharves of said Academy or in this city, and all of which will be in the best interests of said Academy and also in the financial and better interests of all the people of the United States.

Your attention is also respectfully called to the fact that in October, 1896, the Italian corvette and ship of war, *Christofo Colombo*, commanded by Captain Bartolimi, of the Italian Navy, Prince Louis of Italy on board, on a voyage around the world, lay at anchor in the Chesapeake Bay just outside of this harbor, its purpose and desire being to enter this harbor on a visit to the United States Naval Academy, but was prevented only for want of a proper depth of water across said bar or channel—a loss, we submit, while great to said ship and to those on board, was yet greater to the cadets and officers of the United States Naval Academy, who thereby lost the benefit of this foreign object lesson in our waters, which, while in sight, was yet not in easy and cheap access for their benefit and nautical instruction—a loss not to be measured in dollars and cents.

UNITED STATES NAVAL SHIPYARD ON THE SEVERN RIVER, AT ROUND BAY.

The views of the Baltimore Sun, expressed in a leading editorial in its edition of Tuesday, June 15, 1897, as to the appropriateness of establishing a United States naval shipyard on the banks of the

Severn River, Maryland, are so apposite and reflect so fully the views of this board in these premises that this council now submits the same with its cordial concurrence and indorsement, and which views are as follows:

NEEDS OF THE NAVAL ACADEMY.

The recent decision of the Secretary of the Navy to establish a post-graduate course at the Naval Academy for instruction in the construction of vessels is a step to be commended. It has been the custom for a number of years to send a graduate of the Naval Academy each year to study naval architecture at Greenwich or Glasgow and another at Paris. The British Government has declined to receive these students any longer, and our Navy Department has concluded that they can be educated in the United States just as well. Annapolis, it is contended, is sufficiently near a number of navy-yards and shipyards to give practical instruction. But it would be manifestly an advantage to have a shipyard on the spot, in the work of which the students could take an actual and active part, and where they could become familiar with the details of shipbuilding in every department. Annapolis possesses exceptional advantages as a location for a navy-yard. The Severn is a splendid sheet of water; it is sufficiently remote from the ocean to be safe from foreign enemies and convenient to the national capital. The climate is favorable, and Baltimore and the great works at Sparrows Point, from which supplies may be drawn, are near at hand. Nothing would more tend to stimulate invention and effective work in every branch of building warships than a navy-yard at Annapolis, where the naval officers are educated and where so large a number of them are located.

In naval architecture the United States have always been in the lead, and other countries have gotten from us more than we have received from them. As far back as the Revolutionary war a submarine boat was invented by a citizen of Connecticut. When the old frigates of the *Constitution* type were built at the beginning of the century they contained many novel features the result of American ingenuity. These were laughed to scorn by British seamen, but when the test of efficiency in war was applied the British were quick to imitate what they had previously ridiculed. And it is well known that the modern warship had its origin in America. There is, therefore, no reason whatever to doubt that the United States can hold its own in shipbuilding in the future as in the past.

The spirit of our people as exhibited during recent years is sufficient guaranty that the work of building an American navy is not to stop, and the Government should be prepared to provide every appliance for its development. There can be no effective navy without good ships, and good ships are useless without efficient officers to command them and men to work and fight them. Annapolis is the place to provide both. The Naval Academy has never received from the Congress the consideration it deserves. It is a most admirable institution of learning. Its location for beauty and convenience can not be surpassed. But for lack of proper and reasonable appropriations the buildings have been neglected and the instructors hampered in their work. At this very time one of the main buildings which is in constant use has to be propped up from the outside to keep the walls from falling upon the students. Another building has been condemned as unsafe. The cadets have to be quartered in different buildings for lack of room in the main building, making discipline and work as difficult as possible. The time has come when this great national school should receive the consideration at the hands of Congress which the importance of its work demands.

DEFENSE OF THE NATIONAL CAPITAL.

You will bear in mind that at the commencement of the late civil war volunteer troops of the United States Army, under the command of Gen. Benjamin F. Butler, en route by rail to Washington City for its protection, were prevented from passing through Baltimore City, and were compelled to retreat to the Susquehanna River, to there take boats for this harbor, and thence by rail to Washington City.

History often repeats itself, and the occurrences of yesterday are liable to be repeated to-morrow, and the facilities offered by this harbor in the past to aid in the defense of the national capital will not, because they can not, be overlooked in the future.

In addition to the railroad lines now connecting this city with tl national capital, a third line, called the Annapolis, Washington an Chesapeake Line, has been duly determined upon, not exceeding 3 miles in length, more or less, from Washington, which in a period war may play no small part in still further aiding in the defense of tl city of Washington.

This harbor, a part, in fact, of Chesapeake Bay itself, the greate inland sea along the entire Atlantic and Mexican Gulf to Texas, easy of access as it is from all parts of the world, when made by th proposed improvement enterable by vessels of war and of commerc will and must become a strong strategic point in aiding in part in tl defense of the national capital on the parallel 30 miles distant ther from, where our troops and their munitions of war can be concentrat and embarked upon the fleetest ships of war or of commerce of tl greatest draft known to the naval or commercial world, and where, to they can be as easily and as economically disembarked when needed called to aid in maintaining the "common defense."

With batteries of guns numerous enough, properly planted on tl grounds of the United States Naval Academy, and on Greenbu Point, on Horn Point, on Tolleys Point, on Thomas Point, on Hacket Point, and along the line of the western shore of Kent Island, which situate immediately opposite the mouth of the Severn River, of prop caliber, carrying proper projectiles, aided or in cooperation with a su ficient number and right character of ironclads and torpedoes proper stationed and judiciously used, it can clearly be seen how the approach to the entrance of this harbor from Chesapeake Bay would becom thoroughly protected from any hostile fleet desiring or intending eith to enter or to bombard it.

In this connection, in view of the fact that the only ship channel fro the mouth of the Chesapeake Bay to the city of Baltimore, via th Craighill Channel (now enlarged to 27 feet deep), for deep-draft vessel lies to the west and at some distance from the west shore of Ken Island, the suggestion is seriously made whether such defenses as herei outlined for this harbor could not in fact be also considered as prope elements in an exterior line of defense of the upper Chesapeake, an be treated even as an appropriate outer or exterior line of defense fo the city of Baltimore itself.

THE NATIONAL CHESAPEAKE AND DELAWARE CANAL.

An expression of the views of this council in these premises woul not be complete did it not also make due reference to the propose national canal connecting the Chesapeake and Delaware bays, and t declare that, if any one of the several routes heretofore surveyed an reported upon by competent authority for the public waterway be finall selected in order to secure the objects contemplated by its completion said internal improvement will and must enter as an important inte gral factor in the full development of the matters herein considered.

This national subject-matter has received very great attention durin several years last past, and by no one more than by Gen. William I Craighill, Chief of Engineers, who, on page 77 of House Executiv Document No. 102, Fifty-third Congress, third session, recited sai objects to be "the greater facilitation of the defense of a part of th territory of the United States by the opening of an interior short lin of communication between the great bays, Chesapeake and Delawar

and the shortening of a great route of foreign and coastwise commerce. Both of these objects seem to be of national importance."

This council respectfully indorse all the reasons recited and suggested so graphically, fully, and exactly in said House Document No. 102, Fifty-third Congress, third session, why said national interior water communication should be completed at the earliest date practicable, believing, as they do, that the results of its completion will equal, if not surpass, the successful opening of the Iron Gates of the Danube, which proclaimed a new waterway to the Black Sea, an event recently celebrated with great pomp and splendor in the presence of the highest officials in central Europe specially interested therein. But this council in this connection call special attention to the fact that any one of all the routes recommended by the United States Corps of Engineers for adoption lies entirely to the north of this harbor and of Kent Island, and as said engineers here also declare that any route for said canal should be defended by the United States at both its Chesapeake and Delaware ends, this council therefore respectfully submit to you that the national defenses to the entrance and approaches to this harbor must in fact be a part of the proper national defenses for the Chesapeake end of said canal itself.

This additional factor of the National Chesapeake and Delaware Canal, to cost the people of the United States $10,000,000, more or less, suggests the propriety, on the score of national defense and the betterment and fuller development of the United States Naval Academy plant, that the Naval War College and the naval torpedo station, both now located at Newport, R. I., would find an advantageous transfer to the more commodious waters of the Chesapeake Bay, and be permanently established either in this harbor or within proper gunshot range of its nearer approaches, and that, too, without any additional cost—an advantage the greatest possible to said Academy, its cadets, officers, and professors, and to the best interests of the public generally, not only because of the reasons herein recited, but of such others as must readily suggest themselves to you in greater detail in the study of the problem, containing, as this council believe it does, many national elements of strength and merit which enter as integral factors therein.

COMMERCIAL ADVANTAGES OF THE SEVERN RIVER, ROUND BAY, AND OF THE HARBOR OF ANNAPOLIS, MD., AND REASONS WHY WESTERN PRODUCTS COULD BE ECONOMICALLY AND ADVANTAGEOUSLY TRANSPORTED THERETO AND EXPORTED THEREFROM AS A DEEP SALT-WATER OUTLET, AND THE STRATEGIC ADVANTAGES THEY ENJOY IN AID OF THE MILITARY DEFENSE OF THE NATIONAL CAPITAL AND OF THE CITY OF BALTIMORE.

This council also invite your attention to the fact that Chicago to-day is, and in the future must ever be, the great central depot where must concentrate the Western grain and other products for export thence to the markets of the world, and, all other things being equal, the shortest line of transportation is in the end always the cheapest line along which to freight said grain and other products, which always demand the cheapest rates per ton per mile.

Taking Chicago as a center, and describing a circle with a radius equal in length to the distance between Chicago and Annapolis Harbor, you will find that all our other seaports on our Atlantic and Gulf coasts from Portland, Me., to Galveston, Tex., are entirely outside of said

circle, thereby showing that Annapolis Harbor is closer to Chicago than any other harbor from Maine to Texas.

The distances between Chicago to deep tide water, as shown by said circle, are as follows, to wit:

Chicago to harbor at—	Miles.
Annapolis	610
Baltimore	615
Philadelphia	650
Norfolk	710
New York	715
Charleston	775
Savannah	790
Mobile	790
New Orleans	850
Boston	860
Portland	890

In view of the geographical location of Chesapeake Bay and its large tributary feeders and other noted causes, it would seem that the great grain shipments of the West in the recent past have sought these waters in preference to any harbor of the great cordon of harbors from Portland, Me., to Galveston, Tex., a condition of things, all other things being equal, which must continue in the future in an ever-increasing ratio. The commercial contention between the Gulf and Atlantic seaports for the export of grain has been substantially reduced to one between New Orleans and the Chesapeake Bay. While New Orleans last year was at the head of the list of grain-shipping ports and Baltimore was second, yet Baltimore in 1897 leads every port in the Union as an exporter of breadstuffs. The official statement of 1896, regarding the export of corn alone, shows that there were exported from—

	Per cent.
Portland, Me	1.5
Boston	1
New York	9.5
Philadelphia	10
Baltimore	23.5
Norfolk	8.8
Newport News	17.9
New Orleans	27.8
	100

But as all corn shipped from Baltimore, Norfolk, and Newport News has to pass through the mouth of Chesapeake Bay, said table shows that 50.2 per cent of the entire corn crop of the United States exported was in fact exported from the Chesapeake Bay.

Your attention is also called to the fact that the most prominent subject of discussion before all commercial conventions in the trans-Mississippi portion of the United States, where is produced so large a per cent of the wheat and corn of our country, was a deep-water outlet on the Gulf Coast. This was finally secured at Galveston, Tex., but not until Congress appropriated therefor about $6,000,000, and the maximum depth of water secured over the bar of that harbor is 25½ feet.

Less than one-tenth of the money which it took to secure that result will, when judiciously expended therefor, secure a depth of 30 feet, and possibly more in this river and harbor at mean low tide, a result which will enable the entire belt of the West (east of the Mississippi River) to be thereby benefited, and with a shorter and safer and less extensive transit to foreign markets, to say nothing of that factor which will enter into our coastwise trade, the more important and valuable to

Northern ports in the event of the successful completion of said Chesapeake and Delaware National Canal.

In reference to the aforesaid Galveston Harbor improvement, an extract from the Galveston News, published in the Army and Navy Register of September 18, 1897, becomes interesting, and is as follows:

From 13 to 25½ feet is the Galveston record of Maj. A. M. Miller, Corps of Engineers. He found Galveston with 13 feet of water on her bar. He shipped the bar to sea and leaves Galveston with 25½ feet of water where the bar once was, and a straight safe channel 500 feet wide leading into the harbor. Such is the record. The tribute paid to Major Miller in the banquet tendered him by Galveston's commercial interests gives but a faint idea of the gratitude felt by the people of Galveston, Tex., and the great West. Words but poorly serve to express the sentiments of the community.

Howsoever favorable the report of 1896 was as to wheat and corn shipped from the waters of the Chesapeake Bay, the official statement of 1897 is still more favorable, as an extract from the Baltimore Sun of September 16, 1897, clearly shows, which is as follows:

WHAT THE FIGURES SHOW.

A bulletin just issued by the Bureau of Statistics shows the exports of the principal products of the United States during August, 1897, and during the eight months ending with the last day of August, compared with the exports during the same period in previous years. There is a uniform and most gratifying increase not only in the volume of the exports, but in their money value. During the eight months ending with August, 1897, the value of the exports of breadstuffs, cotton, oil, and provisions was $368,971,125, against $327,530,000 in 1894, $304,954,000 in 1895, and $346,235,000 in 1896. The export of wheat during August, 1897, was 14,246,000 bushels, worth $13,118,000. In August, 1896, it was 6,693,000 bushels, worth $4,200,000. The increase in the export of corn was also great. In August, 1896, it was 11,022,000 bushels, worth $3,500,000, and in August, 1897, it was 14,766,000 bushels, worth $4,943,000. The value of the cotton exported during the eight months of the current year was $93,788,000; in the same months of 1896 it was $99,437,000; in 1895 it was $95,222,849, and in 1894, $93,957,000.

In the general increase of exports Baltimore has had a larger share than almost any other port. For the year the export of cotton from Baltimore was 83,812,000 pounds, an increase of more than 13,000,000 over the previous year. In breadstuffs the value of the exports from Baltimore in August, 1897, was $6,807,000 against $2,394,000 in August, 1896, and for the eight months ending with August, 1897, it was $22,993,000 against $14,489,000 during the same months of 1896.

The large increase of corn and wheat exports from this port in August place Baltimore in the first place as an exporter of grain. Baltimore in August exported 5,185,236 bushels of wheat, against 2,350,151 from New York. In the eight months, however, ending with August, New York leads by 5,000,000 bushels. As respects corn exports Baltimore leads both for August and for the eight months. There were 3,306,836 bushels of corn shipped from Baltimore in August, against 2,720,801 from New York; in the eight months 31,175,524 bushels from Baltimore, against 20,407,400 from New York. Even Philadelphia beats New York in August on corn. Baltimore now leads every port in the Union as an exporter of breadstuffs.

COAL, IRON, ETC.

Less than midway between Chicago and the Chesapeake Bay also lie the immense acreage of the iron deposits and coal measures of West Virginia, western Maryland, Ohio, and Pennsylvania, which will find here a deep salt-water harbor, where advantages for transshipment and export will be had equal to any and surpassed by none, whenever the channel of this harbor shall have secured a depth of water of 30 feet at mean low tide.

While New Orleans in 1896 stood at the head of the list of grain-shipping ports, you will also bear in mind that in the sixteen years last past Congress has appropriated about $36,000,000 for the improvement of the trunk line of the Mississippi River, and has also appropriated about

$30,000,000 more for the improvement of the Ohio, Missouri, Red, Arkansas, and White rivers and other branches of that great river system, and many millions more no doubt will yet be needed to be appropriated in the future to render said trunk line and its said feeders in a condition suitable and adequate for the transportation of the products of the great Mississippi Valley to deep tide water. But the cost to complete the improvement of the channel of this river and harbor in the manner recited in this report, cost what it may, will be a bagatelle compared to the amount of money already expended to secure the results now enjoyed by New Orleans, provided, when done, it will enable the producers of the far West, freighters and middlemen, to lay down their products in foreign ports at minimum rates, and to the maximum benefit of the entire country, and all of which results this council believe and respectfully submit to you will be secured by such completion.

WASHINGTON CITY, D. C., AND HER CLAIMS TO BE CONSIDERED AS A PROPER SITE AS A DEEP SALT-WATER HARBOR AND WHEREAT TO CONSTRUCT A NAVAL DRY DOCK.

The attention of this council has also been called to recent publications reciting the advantages of Washington City as a deep-water harbor and for a United States naval dry dock, and wherein a comparison was instituted between the Potomac River and the Mississippi River for cheap transportation and exportation of grain and other Western products.

A portion of said publications we reproduce, simply reciting that whatsoever may be the superior merits of either one of these two rivers over the other, that the advantages of the Annapolis Harbor and Severn River are superior to either, and at less cost, as furnishing a deep salt-water harbor.

So far as Washington City is concerned, you need no suggestion from this council as to reasons pro or con for converting our national capital into a great center of trade and commerce, foreign and domestic.

But in said publication, while contending for the superiority of the Potomac River, it is also admitted therein that even the results necessary to be secured could be secured only by a primary expenditure of not less than $800,000; but how much more after that to maintain the proper status quo in said river is not only not declared, but not even suggested.

This extract, the more valuable because it relies in some of its recitals upon a report alleged to have been made by Col. Peter C. Hains, United States Corps of Engineers, in so far as the same relates to the Potomac River is concerned, is as follows, to wit:

THE POTOMAC RIVER—ITS COMMERCIAL CAPACITY.

There is, perhaps, no better way to demonstrate the great commercial capacity of the Potomac than by a contrast with the Mississippi. The trunk line of the Mississippi River system below St. Louis has as tributaries 44 other rivers, intersecting 22 States. It is a trunk line of a system comprising 16,090 miles of inland navigable rivers, and connecting them with the seaboard. For these and other reasons its commercial capacity is almost universally supposed to be many times that of the Potomac. But the reverse is true, for the commercial capacity of the Potomac, meaning depth of navigation, is four times that of the Mississippi.

From Washington, which is the head of navigation, to the mouth of the river the Potomac has a channel at no point less than 20 feet at low tide. The Mississippi, on the contrary, between St. Louis and Cairo, during the months of August, Sep

ır, October, and November, the season of the year when needed for shipments ıin, has such a low stage of water, so shallow a channel, and so many sand bars t is almost useless for commercial purposes. So alarming is the condition of ver that in February last a delegation of prominent citizens of St. Louis red before the House Committee on Rivers and Harbors to urge a new plan provement. In their arguments they gave the depth of channel for a series of

The figures for the last year are, however, sufficient to show the situation, Depth of channel from St. Louis to Cairo in 1895, August 1 to 10, 9 feet; August 31, 7 feet; September 1 to 15, 7 feet; September 15 to 30, 6 feet; October 1 to feet; November 1 to 30, no navigation on account of low water; December 1 3 feet.

THE DEPTH OF THE POTOMAC.

ery marked contrast with the above are the facts relating to the Potomac taken ı letter in 1890 by Lieut. Col. Peter C. Hains, the Government engineer then in e of the improvements on the Potomac.

reply to your oral inquiries in regard to the depth of water available for vesstween the mouth of the Potomac River and Washington, D. C., I have to state rom the mouth of the river to Kettle Bottoms about 30 feet can be carried at de. Over the Kettle Bottoms there is an available depth of about 21 feet at de, or about 22½ feet at high tide. From Kettle Bottoms to Maryland Point is ample draft for the largest vessels. From Maryland Point to Deep Point is about 21 feet at low tide, or about 22½ feet at high tide. At Deep Point there ıoal on which there is a depth of 19 feet at low tide, or 20½ feet at high tide. there to Giesboro Point there is an available depth of from 24 to 27 feet at low Along the wharves in Washington there is about 20 feet at low tide.

ıe depth in the river could be increased to 24 feet at low tide by deepening on › Bottoms and between Maryland Point and Deep Point, the cost of which l not, in my opinion, exceed about $200,000. This is not an estimate, but a ,"

ı is evidently a very conservative estimate of the possibilities, for the former ıent of the Alexandria Board of Trade, who for a period of twenty years was ed in Potomac River transportation, and who was very familiar with the facts, ıe would for $300,000 agree to provide a channel of 29 feet throughout the whole ı of the river.

e Washington Star of August 18, 1897, supplements some of the oing views in an article of much merit and information, which council now reproduces, as follows:

A DRY DOCK AT WASHINGTON.

ıddition to the concern which they feel as citizens of the Republic in the efforts ›eing made by the naval authorities to secure better docking facilities for the n's warships, the people of Washington undoubtedly entertain a lingering hope f these efforts are successful one of the new docks will be built at the navyin this city. The first and most important local effort of such a choice of site l be the reclamation of a portion at least of the Anacostia flats, at present a ng menace to the health of many thousands. The naval gun foundry at the ard is now almost inaccessible from the sea, owing to the negligence on the of Congress in dealing with the serious problem which the Eastern Branch has nted for years. This great establishment, which should be easy of access by argest battle ships of the Navy, can be reached only at high tide, and then by the smallest craft. The tug that draws the flatboats to and from Indian with their valuable cargoes is with great difficulty worked to her dock under ing conditions, and the day is near when the foundry will be utterly cut off the proving grounds and from the fleets that must occasionally assemble on oast. That the capital of the nation, located on the Potomac largely because safe distance from and yet easy access to the high seas, should be thus cut off communication with the naval force was a contingency that probably never red to the statesmen who made the selection of a site as even the most remote ›ility. That it should be thus isolated is not to be permitted.

› dry dock that should form a supplement to the gun foundry and the nucleus ıew navy-yard here is sadly needed by the naval establishment. That our ships be sent for docking to the British Government dry dock at Halifax is a shame › American nation. The naval authorities themselves realize the situation, and

the Record is filled with their appeals to Congress for appropriations for d to keep pace with the growing squadrons. A board of officers has just hel ference preliminary to the preparation of a project for submission to Congr winter setting forth the needs of the service in this line. The survey of t tion will be incomplete unless the advantages of Washington as a site for a thoroughly investigated and exploited. A dock of the desired size could r built in Washington, where it would be convenient of access as regards from the sea, and yet sufficiently sheltered from an enemy to be secure. T fact can not be maintained as to the docks at New York and Norfolk.

Of course to the cost of a dock at the local navy-yard must be added the of the re-creation of a proper channel to the yard. This project of itself more than the dock, but it is to be recalled that of late Congress has accepted as settled the ultimate need of extensive improvements in this stre answer to all recent appeals on this subject has invariably been that the T at too low an ebb to warrant such an expenditure, and, while there has denial of the necessity of the betterment, both from a sanitary and a milit of view, the matter has been set aside from session to session as somethi done "by and by."

The naval authorities, therefore, have reason to regard this project as vir down for accomplishment at some time, and they should not be deterred b of harbor improvements from recommending the construction of a dry d The two works need not proceed together. The site for the dock can be determined and the reclamation of the marshes and the channel can then plished. It is the firm belief of all members of the present Administratio new tariff will soon bring in an abundant revenue and create a surplus in t ury. If this should come about there will no longer be any valid reason poning such vitally necessary projects as the rescue of the Eastern Branch mud and filth and the reestablishment on its banks of a fully equipped n with a gun foundry and a dry dock.

CHANNEL TO THE PORT ROYAL DOCK.

The Bureau of Yards and Docks is now having condemnation proceeding Port Royal, S. C., preparatory to dredging a channel to the dock at that pl dock is large enough for the *Indiana* or any of the battle ships, but can not b owing to the shallow channel. Work of dredging the channel would b begun before, but it was necessary for the Government to acquire a stri upon which to deposit the dredging and to make a channel which would no up as soon as it was completed. Early next month a contract will be let for a channel deep enough for the large ships.

GRANITE DRY DOCK AT ROUND BAY AT THE HEAD OF RIVER, STATE OF MARYLAND, AND A TIDAL BASIN IN CON THEREWITH, ETC.

In the gradual development of our Navy and of the Unite Naval Academy plant it may in the very near future be deeme sary for the betterment of both, outside of other equally im national purposes, to establish in this harbor not only a Unite shipyard for both repair and construction but also a granite d conditions the more probable whenever a proper depth in the ch this river and harbor shall have been secured, such as will ena sels of war drawing, say, 20 to 30 feet of water to enter and any stage of tide.

While Congress during the ten years last past has made larg priations of money for the due development of our naval ser for the construction of proper ships of war of the greatest nu tons' displacement, with all modern appliances and convenienc has furnished them with formidable armaments, and protect with heavy armor plates, yet an oversight has been made both gress and the Navy Department in not making ample provision structing dry docks at suitable places in the United States al

Atlantic, Pacific, and Gulf coasts; docks sufficient in number, adequate in capacity, and durable as to material, so as to conveniently dock and properly accommodate our ships of war of the greatest number of tons' displacement at all times, and at such places as the wants of our naval service may show to be imperative.

The United States now own, all told (good, bad, and indifferent), only eleven dry docks, four of which are of granite and seven of timber.

The following statement shows the number of dry docks, their capacity, cost of construction, where located, and when built, now owned by the United States Government:

Location.	Date.	Kind.	Cost.	Capacity for ships of—
				Tons.
Portsmouth, N. H.	1848-1851	Balance, wood	$732,905.00	1,500
Boston, Mass.	1827-1853	Granite	972,717.29	3,500
New York, N. Y.	1841-1851	do	2,003,498.05	5,000
Do	1888-1890	Timber	595,019.24	8,000
Do	1893-1897	do	554,687.08	12,000
League Island, Pennsylvania	1889-1891	do	548,700.00	8,000
Norfolk, Va.	1828-1834	Granite	943,676.00	3,000
Do	1888-1890	Timber	501,980.76	8,000
Port Royal, S. C. *a*	1891-1895	do	431,294.03	12,000
Mare Island, California	1872-1886	Granite	2,772,322.08	10,500
Puget Sound, Bremerton, Wash.	1892-1896	Timber	608,812.31	12,000

a Paid to contractor for loss by cyclone, $18,521.42.

Granite dry docks, United States navy-yards, Norfolk, Va., and Boston, Mass.

	Feet.
Thickness of sides at coping (about)	7
Thickness of sides at floor (about)	35

Ends, about the same.

Bottom thickness, 5 feet of masonry resting upon 3½ feet thickness of grillage, which in turn rests upon piles.

Entire facing of dressed granite.

Granite dry dock, United States navy-yard, Mare Island, California.

	Feet.
Thickness of side at coping (about)	4
Thickness of side at floor (about)	50

End thicknesses, about the same.

Thickness of bottom (about) 8

Entire facing of dressed granite. No piling.

Granite dry dock, United States navy-yard, New York.

	Feet.
Thickness of sides at coping (about)	5
Thickness of sides at floor (about)	39

End thicknesses, about the same.

Bottom thickness, 4 feet of masonry resting upon 2½ feet thickness of grillage, which in turn rests upon piling.

Entire facing of dressed granite.

The following is a table of the dimensions of dry docks in the U States navy-yards:

Harbor.	Kind.	Material of construction.	Length on coping, head to outer gate sill.	Length on floor, head to—			Deduct for caisson.	Width of entrance—	
				Outer gate sill.	Inner gate sill.	Inner abutment.		At coping.	On bottom.
			Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft. In.	Ft.
Portsmouth, N. H.	Balance.	Wood.....	350 0	.....	.....	.....	.....	90 0	60
Boston, Mass	Graving dock.	Granite...	396 5½	367 5½	356 11½	292 6½	9 0	60 0	(a
New York, N. Y..	....do ...	....do	369 8	338 8	326 0	254 0	8 0	66 0	(a
Do.....	....do ...	Wood.....	500 0	459 10	439 10	419 10	8 0	85 0	52
Do.....	....do ...	....do	670 0	626 8	606 8	586 8	11 0	105 2½	71
League Island, Pa	....do ...	....do	500 0	459 10	439 10	419 10	8 0	85 0	52
Norfolk, Va.....	....do ...	Granite...	331 9	302 9	292 3	227 10	7 6	60 0	(a
Do.....	....do ...	Wood.....	500 0	459 10	439 10	419 10	8 0	85 0	52
Port Royal, S. C...	....do ...	....do	495 0	459 0	440 0	420 0	9 6	97 0	66
Mare Island, Cal..	....do ...	Granite...	513 0	459 0	438 0	418 0	7 6	80 6½	(a
Puget Sound.....	....do ...	Wood body, masonry entrance.	650 0	618 6	593 6	573 6	10 0	92 7½	(a

a Inverted arch.

So grave of late has been and now is the want of greater and docking facilities for our naval vessels that the naval authori Washington were compelled to send, in August, 1897, the United battle ship *Indiana* (normal displacement, 10,298 tons, and when with coal to full bunker capacity, 11,000 tons, and 24 feet dr the British dry dock at Halifax, Nova Scotia, to be there docke proper examination of her bottom and keel and such repair as be found necessary, and concerning which the Washington S August 16, 1897, published as follows:

DOCKS FOR NAVAL VESSELS.—A PROJECT TO BE SUBMITTED TO THE NEXT OF CONGRESS.

Admiral Bunce, commandant of the Brooklyn Navy-Yard, Commodore Ch chief of the Equipment Bureau, and Naval Constructor Dashiel were in co with Acting Secretary Roosevelt at the Navy Department to-day, consider general way the subject of dry docks for the naval vessels of the United The conference is preliminary to the preparation of a project for dry dock submitted to Congress at the next session. The necessity which compel *Indiana* to go to Halifax to be docked has aroused the Navy Department to th tance of having a system of docks in this country which can be utilized fo the war vessels.

There have been many attempts in the past to secure better docking facil naval vessels, but so far they have not been successful. Several plans for th ing of large docks at different naval stations have been proposed, but none been found satisfactory. Naval officers have urged the importance of having dock either at Charlestown, Mass., or Portsmouth, N. H.; also at Norfolk some point on the Gulf, possibly in the mouth of the Mississippi River near La., and another on the Pacific Coast. It is expected that the reasons for mo and the urgent necessity of two or more capable of holding the largest bat will be set out in the project to be submitted by the Navy Department.

The following are the dimensions of the British dry dock in wh United States battle ship *Indiana* was docked in the month of A 1897, at Halifax, Nova Scotia: Opened September 20, 188 structed of stone; length over all, 600 feet; over blocks, 560 feet; at entrance, top, 89.5 feet; at bottom, 81 feet; depth on sill, high ordinary springs, 30 feet. Walls are 4 feet 6 inches to 30 feet in ness, of concrete; all altars are of granite; also the sides, which are

ınd sides of dock are of granite, and the steps which are set on each and the copings are of granite; also the entrances all granite. All ite is dressed, single axed. The floor is concrete, placed upon solid with pitch pine timber bedded in same, the whole being covered 5 inches of pitch-pine plank. Granite blocks 6 feet by 3 feet are d under all keel blocks, and granite is under all bilge blocks. Cost ıated at $750,000. There is no tidal basin connected with this dry . Spring rise of tide at Halifax, 6 feet. The neap rise of tides t, the neap range 3 feet. Width of channel into port, one-half Depth in channel, from 10 to 20 fathoms. Average depth of r in harbor, about 13 fathoms. Depth of water in harbor off the is from 10 to 11 fathoms.

e great necessity, now every where admitted and by no one denied, ven by our own naval authorities, who, in August, 1897, ordered l Constructor Robert B. Dashiel, United States Navy, to England Wales, to there secure proper information for the United States l board hereinbefore referred to, now preparing a project for a m of dry docks for the better and larger docking facilities for our l vessels, is such that the general subject-matter will no doubt be ›fficially before Congress at its next session.

is grave necessity must lead to the consideration of the question lopting a Governmental policy of either enlarging our present locks at their present locations or the establishment of new dry s at their present sites or at such new and different sites as may ar either geographically or otherwise to recommend themselves.

view of these premises, this council feel justified in urging before as Maryland's delegation in Congress, and through you upon Con-ı, the location of Round Bay, at the head of Severn River, Mary-, as presenting very many strong recommendations as furnishing itable site whereat to construct a new granite dry dock, with city for docking any United States vessel of the maximum num-›f tons displacement under extreme conditions of load.

›und Bay is situate at the head of Severn River, some 10 to 12 miles its mouth, where it empties into Chesapeake Bay, and is over 1 wide and thoroughly sheltered from all storms and perfectly pro-›d from all enemies. It is landlocked, accessible to the sea, and y and cheaply reached by land or water. It is in close proximity ›th the Pennsylvania and Baltimore and Ohio Railroad systems their respective feeders, and is within reach of the United States al Academy, and for all the purposes recited in this report pos-›s advantages during peace or war not surpassed by any locality he entire Atlantic Seaboard, and where the midshipmen at the ed States Naval Academy may daily enjoy an object lesson of value; it may be more or less essential in the perfection of their studies ng their naval course at said Academy.

ıe water in Round Bay is now from 21 to 23 feet deep at mean low at the head of Severn River, the water of which is of equal depth ıat of said Round Bay, and which depth this council urges upon and through you upon Congress, should be improved by increasing channel depth of said river and of said Round Bay and Annapolis bor to 30 feet and widened to 150 feet at the bottom, with side es 1 on 3 at mean low water.

› secure said latter result, and to construct said dry dock on said nd Bay, this council now respectfully urges upon you to secure ›ppropriation adequate to straightening said channel and widening › 150 feet and deepening it to 30 feet from the Chesapeake Bay to ınd Bay, with a proper tidal basin near said dock.

While said proposed dry dock is being constructed the said i ment of said river could be going on, and all said works, from t of commencing same, be completed by the end of two years.

Attention is especially called to the extensive quarries of ex granite on the banks of the Susquehanna River, with all water c thence to Round Bay, and also other large quarries of granite i ard and other counties of Maryland, with direct and cheap r transportation from said quarries to Round Bay by the const of less than 5 miles of new railroad.

Severn River possesses a feature rarely if ever enjoyed by an stream, to wit, of having at its head at Round Bay water wi deeper than at its mouth.

The freedom from ice of this river and bay in nearly all wint feature of no small value during peace or war. (For valuable peake Bay ice statistics, especially from Baltimore to the m Severn River or to Thomas Point, this council refers you to p to 52 of House Ex. Doc. No. 102, Fifty-third Congress, second se

It has frequently been stated that had the Severn River and Bay been situate either in the States of Maine, New Hampshire, chusetts, Rhode Island, or Connecticut, that their delegations i gress would have long since secured from Congress an approp of money adequate to making these proposed improvements, an this stream would long since have been one of the Tynes or Cly America—both banks with continuous lines of towns and village Round Bay to the Chesapeake.

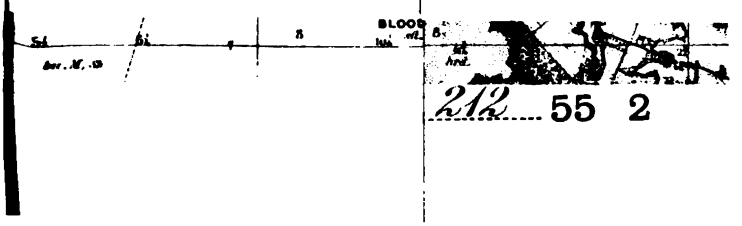
This council submits a map of said Severn River and of Roun the same being a section of chart No. 135 of the official charts United States Coast and Geodetic Surveys of 1896.

This section of Coast Survey Chart No. 135 gives the location o Island and of so much of Chesapeake Bay as shows its whole opposite the mouth of the Severn River and said island, and of so of the western shore of Chesapeake Bay as is situate between the of West River on the south and Magothy River on the north. Th gestion is made that if this memorial be ordered to be printed b gress, the plates from which this engraved chart, No. 135, was p could be economically used in multiplying copies of this map.

By an official report on European dockyards made under due aut by Naval Constructor Philip Hichborn, United States Navy (now of the Bureau of Construction and Repair, United States Navy D ment, Washington, D. C.), submitted on October 12, 1885, to the the of that bureau, Naval Constructor Theodore D. Wilson, United Navy, and printed by authority of Congress, it appears that the E Government had at Portsmouth, England, alone, more stone dry than the United States has now all put together on our Atlantic, P and Gulf coasts, including all those constructed of stone and of ti

It is also shown that the pay roll at said Portsmouth dockyard showed 5,660 employees, representing in wages alone $1,916,33 annum; that it is at this shipyard where England pursues a poli grouping under its own auspices and at one and the same locali facilities necessary to the full completion of her modern ships of fully equipped with men, provisions, coal, guns, and ammuniti ready for active commission on leaving said shipyards.

It was also at said Portsmouth shipyard where England had lished one of her largest convict prisons, which is never empty for of inmates, who are never idle for want of work in connection with branch of the works at that greatest of all British yards.



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The said British granite dry dock at Halifax, Nova Scotia, is not only larger than any dry dock owned by the United States along the Atlantic Coast, but English policy has constructed in close—almost juxta—proximity to our own coast other similar dry docks, one at Esquimalt, Vancouver Island, British Columbia, one at Kingston, Ontario, one at Quebec, Canada, and one at St. Johns, Newfoundland.

In reference to these dry docks, over which the flag of England floats, and the part they are capable of playing in any national conflict between the United States and Great Britain, Mr. Frank G. Carpenter, the popular writer and able journalist, writing for the Washington Evening Star from Quebec, Canada, under date of September 6, 1897, a letter published in that journal Saturday, September 11, 1897, recites as follows:

CANADA'S DEFENSES—A VISIT TO THE FAMOUS OLD FORT OF QUEBEC.

The fact that one of our biggest battle ships, the *Indiana*, is now in the dry dock at Halifax is a striking evidence of our want of preparation for a possible war with Great Britain. The Canadians point to the fact with exultation, and rather sneer at Uncle Sam for having to go out of his own boundaries to clean the barnacles off of his men-of-war. The Canadians have six good dry docks in which their naval vessels can be cleaned. They have five of these on the Atlantic Coast, and there is a magnificent one at the entrance to Puget Sound, on the Pacific. Canada has within recent years been steadily improving her defenses. The Canadian Pacific Railroad, which is one of the best-equipped lines in the world, was largely built for this purpose, and the line of steamers which goes from Vancouver to Hongkong is subsidized by England.

ESQUIMALT DRY DOCK.

England has a naval station so close to our northwestern boundary that within four hours her men-of-war could steam from it to within shooting distance of Seattle and Tacoma. This station is at Esquimalt, very near the city of Victoria, on Vancouver Island. It is connected with Victoria by an electric railroad. The character of the island is mountainous, and the mountains come down to the water so that they form here a shelter from the storms and make the harbor an excellent one. This fort practically controls the Straits of Fuca and the entrance to Puget Sound. It is so near our coast that the morning and evening guns may be heard in the American town of Port Townsend across the way. General Miles, who was stationed for a long time on the Pacific, says that in twenty-four hours the British fleet at Esquimalt could take absolute possession of Puget Sound and destroy its cities and towns. This fort thus, to a certain extent, controls the two great trunk railroads which pass through the northern part of the United States and have their termini at Seattle and Tacoma. I refer to the Northern Pacific and the Great Northern. The dry docks at both Halifax and Esquimalt are large enough for the biggest battle ships. The dock at Esquimalt is built of stone, and is said to be one of the finest of the world.

THE DEFENSES OF THE ST. LAWRENCE.

Here at Quebec you see something of the defenses which Canada has been constructing within recent years. She has dredged the St. Lawrence so that the biggest ocean steamers can go to Montreal, and she has built such a set of canals that small steamers can get clear to the head of Lake Superior. The dredging of the St. Lawrence has made Montreal the chief seaport of Canada, and Quebec is now more than ever purely a city of defense. The city has been called the Gibraltar of America. It is as sleepy as Alexandria, Va., and were it not for the firing of the guns on the many forts about it morning and evening, and the tramping now and then of a company of soldiers through its rocky streets, you might almost imagine it a city of the dead. It has about 60,000 people, and is, if anything, falling off in population. The town is built on a great bluff, which rises almost vertically 350 feet from the St. Lawrence River, which at this point is less than a mile wide. This bluff is rocky, and from its sides, in sailing along the St. Lawrence, you can see the mouths of cannon frowning down upon you. Upon the highest part of the bluff there is a great fort, known as the citadel. This has immense walls of stone, upon the top of which are many cannon. The fort includes about 42 acres, filled with barracks and magazines. Back of the fort, some distance away, are the Plains of Abraham, where the French and the British fought in 1759. The English troops

landed from the British fleet under the cover of darkness, scaled the cliffs, and, under General Wolfe, formed their lines of battle. Wolfe died on the field, and Montcalm, the French general, was mortally wounded. It was by this fight that the English finally got possession of Quebec. It was about fifteen years later that Benedict Arnold and the American troops fought the British here and were defeated.

INSIDE THE FORTIFICATIONS.

I visited the fort this morning, climbing up the steps which lead from the Dufferin terrace to it. My camera was taken from me before I was admitted, and under the guard of a soldier I was shown over the fort. The most of the guns are old ones, though I am told that there are several 7 and 8 inch modern guns among them. There are dozens of mortars, with piles of cannon balls lying beside them, and I walked over the ground below which were stored the magazines of the fortification. From the edge of the battlement on the other side of the river I could see three other forts, which have cost, I am told, $25,000,000, and in the sides of the hill below me I saw the black holes behind which were cannon. The soldier who took me over the fort was a thorough Englishman and a thorough beggar. He told me in response to my question as to how he liked the life of a soldier, that it depended upon how he was treated from time to time. Said he: "You see, I get only 30 cents a day for my pay, but visitors sometimes give me something for showing them around. We soldiers take turns in taking the tourists over the fort, and we depend upon our fees for our extra boots and clothes. I only get two suits of clothes a year from the Government, and you know that 30 cents a day is not much." I made the man happy by giving him a quarter when I left him.

As I walked down the hill back of the fort I saw something as to how the Canadian soldiers earn their 30 cents a day. Some were working on the road, others were cutting grass, and a third gang was making a fence. There are only 180 soldiers in the fort on the citadel, and I am told that the garrisons of the other forts are equally small.

Not only this, but England has constructed similar docks at other places, where the flag of England floats for the protection of her commercial supremacy.

As late as August 7, 1897, a cablegram from London recites as follows:

HARBOR AND DOCK AT SIMONS TOWN.

London, August 7.—A dispatch to the Times from Cape Town says the Imperial Government intends to build a harbor and graving dock at Simons Town, at a cost of £2,500,000.

Simons Town is a town of Cape Colony, on Simons Bay, about 25 miles south of Cape Town. It is the port to which ships resort for repairs, and is situate on the west shore of False Bay, on the east coast of Africa, about 12 miles north of the Cape of Good Hope and about one-third the distance between the Cape of Good Hope and Cape Town, which is situate on Table Bay, in South Africa.

So that it fully appears that, whatever else the British Government may possibly have neglected in the past, or is neglecting in the present, in the full development of her financial growth, in her gigantic commercial march around the world, she has not neglected or is now neglecting her navy or failing to make adequate provision by dry docks for their proper repair in their cruise to every sea to maintain English conquest in every clime.

While the international celebration in June, 1897, of the British Queen's diamond jubilee was grand in all its features and proportions, yet in no respect, view it as we may, was it so grand as in that marvelous naval exhibit, where were rendezvoused under the English flag, in one grand British fleet, 166 English vessels of war, the strongest and most effective fleet which ever floated on or sailed the seas, a fleet which included torpedo boats and torpedo destroyers of 30 knots, to the formidable battle ships of the maximum displacement and of the greatest power ever built.

This greatest of all great naval exhibits was not a useless expendi-
e of English sovereigns, but was for the purpose of teaching other
:ions that England was not only the mistress of the sea, but to evi-
ıce the strength and capacity of England's imperial policy of defend-
: the shores of her own domain by demonstrating her ability, through
· naval strategy and skillful naval maneuvers, to destroy the com-
rce of all other civilized nations on the high seas or of successfully
acking and devastating their own coasts where defenseless, or block-
ng or destroying their own harbors where exposed, or bombarding
destruction their own cities (like ours) where not properly protected
m hostile fleets.

Speaking in an open session of the Senate of the United States, on
y 13, 1897, of this grand English naval exhibit, and of its national
ıning, Hon. William M. Stewart, United States Senator, said as
ows:

[Congressional Record, July 13, 1897, p. 2932.]

r. STEWART. Mr. President, I wish to enter a protest here and now against any
ression that the United States will not be compelled to build a great navy in
:r to maintain its position as a great nation.

r. HALE. It will have to finish its ships, will it not?

r. STEWART. The threat exhibited by Great Britain in the jubilee proceedings is
arning to the world that it is either build ships or subjugation. Great Britain
over 350,000,000 slaves, besides what she can make by her commercial trade, for
350,000,000 Hindoos are the most abject slaves the world has ever known. The
'ptians are slaves and are whipped on the back. Wherever the power of Great
:ain extends over other nations, she enslaves them, and she invites the world to
old an armament the like of which was not only never seen before, but which
itively surpasses the imagination of man.

his power, I say, is surrounding us, with her guns pointed to the great Republic
n every side, building fortifications from Halifax around to the Gulf and on the
ific Coast, spending millions, yea, hundreds of millions, to point guns at us and
uild fortifications. With such a navy as she has, hostile as she is to free insti-
ons, greedy as she is of slaves, it is idle to talk about suspending the building of
ıvy if the great Republic is to continue.

othing is more humiliating than the idea that two or three men, with Carnegie
heir head, can dictate the terms upon which the Navy must be built. It is bad
ugh to have monopoly in other things, but to have a few private parties stand in
gateway between us and self-defense is something which we ought never to
rate.

s to Mr. Carnegie himself, some suspicion may exist with respect to which side
would take in case of conflict between us and his country. If he took our side,
ight endanger his prospect for good standing in English society and the chances
eing returned to the English Parliament, for which, I understand, he is very
itions. Before I would submit to his saying, "You shall give me your millions
ou shall not build a navy," I would stop here and now, and build a plant capa-
of building such ships as might be necessary for self-defense. Two more ships
do us no good. If that is all we have got to do, then they had better rot.
en we see the miles and miles in extent of the wonderful armament that England
ibits, two more ships will add nothing to us, comparatively, if we are under the
essity of building a navy, as I believe we are, though I deprecate it exceedingly.
wish civilization had advanced in the right direction. I wish this highly civil-
country before which we bow down, which is our pretended friend and our
lly enemy, had turned its attention to some other mode of civilization. I wish
ad not exhibited in this jubilee celebration the most gigantic navy the world
· saw. I wish it had not menaced civil institutions everywhere. I wish the
lee had not been a threat. I wish the sixty years which preceded it had not
ked the most terrible progress in slavery and oppression of any sixty years in
ıan history. I wish it had not occurred. Having occurred, it stands before us.
lieve that our duty as American citizens is to be prepared to defend the Ameri-
flag, and I would not have a Carnegie or any other candidate for the British
liament say what we shall pay for ships or whether we shall have them at all.

; seems to me the only course open to us is to build such works as may be neces-
y to enable us to be independent in the matter of self-defense at least. The
ount of the blackmail which is now demanded is a bagatelle. Nobody cares for
it. It is but a small percentage of what has gone before, but steps to prevent

this blackmail can not be taken too soon. I am in favor of putting on the pending bill a provision authorizing the construction of a plant sufficient to provide for emergencies, sufficient to enable the United States to be independent in the matter of self-defense.

This important public and warning declaration so openly and recently made in the Senate of the United States in support of the reasons therein recited for maintaining an efficient Navy, with all that which an efficient Navy clearly means, has recently been supplemented by the present Assistant Secretary of the Navy, Hon. Theodore Roosevelt, in an able article published in the Baltimore American of September 5, 1897.

In this article are briefly and tersely summarized sundry recitals and recommendations of nearly all Presidents of the United States, from Washington to McKinley, in behalf of maintaining the American Navy at the highest possible standard of proficiency and efficiency.

As this article bears directly upon the subject-matter of the efficiency of our Navy, and as naval efficiency can not be secured without an adequate number of dry docks judiciously established so far as geographical locations are concerned, this council, therefore, now reproduces this article, which is as follows:

A NAVY IS NECESSARY—THE VIEWS OF THE PRESIDENTS OF THE COUNTRY COMPILED—HON. THEODORE ROOSEVELT, ASSISTANT SECRETARY, POINTS OUT THE IMPORTANCE OF THE DEPARTMENT OF NATIONAL SERVICE, AND ADDS THE OPINIONS EXPRESSED BY THE DIFFERENT EXECUTIVES, FROM WASHINGTON TO M'KINLEY—THE SERVICES THAT HAVE BEEN RENDERED.

The following references by Presidents of the United States to the urgent need of the United States possessing a proper Navy, corresponding to the nation's position as a great power, and ready at any time for efficient service in war, could be multiplied a thousandfold from the speeches and writings of almost all the statesmen who have striven disinterestedly and intelligently for the true honor and greatness of America. By no means all of the references made by the Presidents themselves have been taken. Many of them, such as President Taylor's urgent appeals for the establishment of a retiring list, and pension list, and the improvement of the personnel of the Navy, or the recitals of the glory gained and conferred by the Navy in the war of 1812 and the civil war, are omitted because they do not bear on the problem of the present day, which is, in my own opinion, to further strengthen the Navy, both in material and personnel, in battleships, in torpedo boats, in dry docks, in numbers of officers and men.

Fortunately, the quality of the ships and guns, and of the officers and men that we have, is excellent.

The utterances of the Presidents here quoted tell in outline the growth of the Navy. Washington first advocated its formation for reasons which apply now as forcibly as they applied when he wrote, over a century ago. What he said shows well how on this, as on all other questions, the greatest of Americans approached every problem of vital interest to America in a spirit of the broadest patriotism and statesmanship, combined with clear appreciation of the needs of the present and keen insight into the greater needs which the future would develop.

Under the elder Adams the Navy which Washington advocated was actually begun, and even in its infancy it accomplished feats of note. The work of building it up was unwisely stopped, and the war of 1812 showed clearly the vital benefits conferred upon the nation by the little Navy which it possessed and the terrible loss and damage caused by the fact that in size this Navy was but a small fraction of what it should have been. The utterances of Monroe, the younger Adams, and Andrew Jackson show that the lesson was at least partially learned, and our Navy, though never brought up quite to the standard it should have been in point of size, was nevertheless maintained in a condition not wholly out of proportion to the needs and the honor of the nation.

Especial attention should be paid to the third quotation from Andrew Jackson. The victor of New Orleans had that "instinct for the jugular" which is possessed by every great fighter. All that he says applies to the present day, for, as he points out so clearly, the only effective defensive is the offensive; the only way to defend our own sea coast properly is to attack our enemy instead of waiting for him to attack us. It is for this reason that we can not afford to rely purely upon torpedo boats or upon any kind of mere coast-defense vessels. Though it is, of course, absolutely necessary to have an abundance of torpedo boats, we must also possess a

powerful fleet of ships able to hold the seas, able to make long voyages, to stand rough weather, and to meet and overcome in the shock of actual fight any enemy's fleet, for it is the enemy's fleet which should be the true objective in naval war. Fortifications are indispensable, but they in no sense equal or supply the place of a fighting navy.

The effect of bringing the Navy up to something like a proper standard was shown in the inestimable services it rendered during the civil war. It is characteristic of Lincoln's farseeing statesmanship and loving care for the welfare, ultimate as well as immediate, of the people for whom he was soon to lay down his life, that in the midst of the iron stress of the civil war, when the problems of the present would have wholly absorbed any lesser man, he should yet have thought of the future in connection with our Navy and should have advocated the building of those sea-going battle ships which, though not needed in civil strife, would most assuredly be indispensable if the honor and renown of America were to be upheld against foreign powers.

After the close of the civil war there came a period of reaction and decline. In spite of President Grant's repeated warnings and protests a spirit of economy prevailed, and our Navy was suffered to sink below the level of that of even the third-rate powers. Then, in the middle of President Arthur's Administration, the turn came. The people and their representatives awoke to what was demanded by national self-respect, and ever since then, under every Administration, the work of building up has gone steadily on.

In point of efficiency our ships need fear comparison with those of no foreign nation, and, though they are not as numerous as they should ultimately be, yet long strides in the right direction have been taken. If we continue to build up our Navy for a few years to come along the lines we have followed for the fifteen years immediately past we shall, within a comparatively short period, place the United States where she should be—among the naval powers of the world. Such a navy would be, as all of our great leaders from the days of Washington and the elder Adams to our own have pointed out, the surest guarantee of peace; and if by any unlucky chance we were to have war it would not merely save us from material disasters, but, what is of incalculably more moment, it would prevent that loss of national honor which would be felt as keenly in the farthest interior of the country as on the seaboard of the Atlantic or the Pacific.

THEODORE ROOSEVELT,
Assistant Secretary.

GEORGE WASHINGTON.

[December 8, 1798.]

To secure respect to a neutral flag requires a naval force organized and ready to vindicate it from insult or aggression. This may even prevent the necessity of going to war by discouraging belligerent powers from committing such violations of the rights of the neutral party as may, first or last, leave no other option.

These considerations invite the United States to look to the means and to set about the gradual creation of a navy.

However pacific the general policy of a nation may be, it ought never to be without an adequate stock of military knowledge for emergencies. This lack would impair the energy of its character and hazard its safety or expose it to greater evils when war could not be avoided. Besides that, war might often not depend upon its own choice. In proportion as the observance of pacific maxims might exempt a nation from the necessity of practicing the rules of the military art ought to be its care in preserving and transmitting, by proper establishments, the knowledge of that art. The art of war is at once comprehensive and complicated. It demands much previous study, and the possession of it in its most improved and perfect state is always of great moment to the security of a nation.

JOHN ADAMS.

[May 16, 1797.]

Naval power is the natural defense of the United States.

[December 8, 1798.]

In demonstrating by our conduct that we do not fear war, for the necessary protection of our rights and honor we shall give no room to infer that we abandon the desire of peace. Efficient preparation for war can alone insure peace.

The beneficial effects of the small naval armament provided under the acts of the last session are known and acknowledged. Perhaps no country ever experienced more sudden and remarkable advantages from any measure of policy than we have

derived from the arming for our maritime protection and defense. We ought without loss of time to lay the foundation for an increase of our Navy to a size sufficient to guard our coast and protect our trade. Such a naval force would afford the best means of general defense.

[December 3, 1799.]

A steady perseverance in a system of national defense commensurate with our resources and the situation of our country is an obvious dictate of wisdom, for nothing short of the power of repelling aggressions will secure to our country a rational prospect of escaping the calamities of war or national degradation.

[November 27, 1800.]

A navy, well organized, must constitute the natural and efficient defense of this country against all foreign hostility.

JAMES MADISON.

[May 25, 1813.]

The brilliant achievements of our infant Navy claim the highest praise and the full recompense provided by Congress.

[December 5, 1815.]

The signal services which have been rendered by our Navy and the capacities it has developed for successful cooperation in the national defense will give to that portion of the public force its full value in the eyes of Congress. To preserve the ships we now have in a sound state, to complete those already contemplated, to provide amply for prompt augmentations, is dictated by the soundest policy.

JAMES MONROE.

[January 30, 1824.]

In the late war our whole coast was either invaded or menaced with invasion. There was scarcely an harbor or city on any of our great inlets which could be considered secure. In whatever direction the enemy chose to move with their squadrons and to land their troops, our fortifications, where any existed, presented but little obstacle to them. Their squadrons, in fact, annoyed our whole coast, not of the sea only, but every bay and great river throughout its whole extent. In entering these inlets and sailing up them with a small force the effect was disastrous, since it never failed to draw out the whole population on each side and to keep it in the field while the squadron remained there. The expense and exposure of the inhabitants and the waste of property may readily be conceived. These occurrences demonstrate clearly that in the wars of other powers we can rely only on force for the protection of our neutral rights, and that in any war in which we may be engaged hereafter with a strong naval power the expense, waste, and other calamities attending it, considering the vast extent of our maritime frontier, can not fail, unless it be defended by adequate fortifications and a suitable naval force, to correspond with those which were experienced in the late war. Two great objects are, therefore, to be regarded in the establishment of an adequate naval force—the first to prevent war so far as it may be practicable; the second to diminish its calamities when it may be inevitable. No government will be disposed to violate our rights if it knows we have the means and are prepared and resolved to defend them.

JOHN QUINCY ADAMS.

[December 6, 1825.]

A military marine is the only arm by which our power can be estimated or felt by foreign nations, and the only standing military force which can never be dangerous to our own liberty. A permanent naval peace establishment, adapted to our present condition and adaptable to that gigantic growth with which the nation is advancing in its career, is among the subjects which have already occupied the foresight of the last Congress. Our Navy, commenced upon a scale commensurate with the incipient energies, the scanty resources, and the comparative indigence of our infancy, was even then found adequate to cope with the powers of Barbary and with one of the principal maritime powers of Europe.

At a period of further advancement, but with little accession of strength, it has not only sustained with honor the most unequal of conflicts, but covered itself and our country with unfading glory. But it is only since the close of the late war that by the numbers and force of the ships of which it was composed it could deserve the name of a navy.

[December 5, 1826.]

s have twelve line-of-battle ships, twenty frigates, and sloops of war in propor- which, with a few months of preparation, may present a line of floating forti- ns along the whole range of our coast. Combined with a system of fortifications the shores themselves, it has placed in our possession the most effective sinews ar, and has left us at once an example and a lesson from which our own duties be inferred. The gradual increase of the Navy was the principle of which the f 29th April, 1816, was the development. It was the introduction of a system t upon the character and history of our own country for an indefinite series of It was a declaration of that Congress to their constituents and to posterity it was the destiny and the duty of the United States to become in regular es of time and by no petty advances a great naval power.

ANDREW JACKSON.

[March 4, 1829.]

s increase of our Navy, whose flag has displayed in distant climes our skill in gation and our fame in arms; the preservation of our forts, arsenals, and dock- , and the introduction of progressive improvements in the discipline and ce of both branches of our military service are so plainly prescribed by pru- that I should be excused for omitting their mention sooner than for enlarging eir importance.

[December 8, 1829.]

nstituting, as the Navy does, the best standing security of this country against gn aggression, it claims the especial attention of Government, and should con- to be cherished as the offspring of our national experience.

[March 4, 1837.]

nation, however desirous of peace, can hope to escape occasional collisions other powers, and the soundest dictates of policy require that we should place lves in a position to assert our rights if a resort to force should ever become sary. Our local situation, our long line of seacoast, indented by numerous with deep rivers opening into the interior, as well as our extended and still asing commerce, point to the Navy as our natural means of defense. It will in nd be found to be the cheapest and most effectual, and now is the time, in a n of peace, that we can year after year add to its strength without increasing urdens of the people. It is your true policy, for your Navy will not only pro- our rich and flourishing commerce in distant seas, but will enable you to reach annoy the enemy, and will give to defense its greatest efficiency by meeting er at a distance from home. It is impossible by any line of fortification to l every point from attack against a hostile force advancing from the ocean and ing its object, but they are indispensable to protect cities from bombardment, ards and arsenals from destruction, to give shelter to merchant vessels in time ar and to single ships or weaker squadrons when pressed by superior force. fications of this description can not be too soon completed and armed and d in a condition of the most perfect preparation. The abundant means we now se can not be applied in any manner more useful to the country, and when this ne and our naval force sufficiently strengthened we need not fear that any n will wantonly insult us, or needlessly provoke hostilities. We shall more inly preserve peace when it is well understood that we are prepared for war.

JOHN TYLER.

[December 7, 1841.]

ery effort will be made to add to the efficiency of the Navy, and I can not too gly urge upon you liberal appropriations to that branch of the public service. xtended and otherwise exposed maritime frontier calls for protection, to the hing of which an efficient naval force is indispensable. We look to no foreign ests, nor do we propose to enter into competition with any other nation for macy on the ocean; but it is due not only to the honor, but to the security of eople of the United States, that no nation should be permitted to invade our s at pleasure. Parsimony alone would suggest the withholding of the necessary s for the protection of our domestic firesides from invasion and our national from disgrace. I would most earnestly recommend the increase and prompt ment of that gallant Navy which has lighted up every sea with its victories and l an imperishable glory over the country.

JAMES K. POLK.

[December 2, 1845.]

Our reliance for protection and defense on the land must be mainly on our citizen soldiers, who will be ever ready, as they ever have been ready in times past, to rush with alacrity at the call of their country to her defense. This description of force, however, can not defend our coasts, harbors, and inland seas, nor protect our commerce on the ocean or the lakes. These must be protected by our Navy.

Considering an increased naval force, and especially steam-vessels, corresponding with our growth and importance as a nation, and proportioned to the increased and increasing naval power of other nations, of vast importance as regards our safety and the great and growing interests to be protected by it, I recommend the subject to the favorable consideration of Congress.

ABRAHAM LINCOLN.

[December 8, 1863.]

The duties devolving on the naval branch of the service during the year, and throughout the whole of this unhappy contest, have been discharged with fidelity and eminent success.

The events of the war give an increased interest and importance to the Navy, which will probably extend beyond the war itself.

The armored vessels in our Navy, completed and in service, or which are under contract and approaching completion, are believed to exceed in number those of any other power. But while these may be relied upon for harbor defense and coast service, others of greater strength and capacity will be necessary for cruising purposes and to maintain our rightful position on the ocean.

No inconsiderable embarrassment, delay, and public injury have been experienced from the want of governmental establishments (sufficient in number and adequate in character) for the construction and necessary repair of modern naval vessels. I think it my duty to invite your special attention to this subject. Satisfactory and important as have been the performances of the heroic men of the Navy, they are scarcely more wonderful than the success of our mechanics and artisans in the production of war vessels which have created a new form of naval power.

I commend to your consideration the policy of fostering and training seamen for the naval service.

U. S. GRANT.

[December 5, 1870.]

The appropriations made for the last and current years were evidently intended by Congress, and are sufficient only, to keep the Navy on its present footing by the repairing and refitting of our old ships. This policy must, of course, gradually but surely destroy the Navy. It can hardly be wise statesmanship in a Government which represents a country with over 5,000 miles of coast line on both oceans, exclusive of Alaska, and containing 40,000,000 of progressive people, with relations of every nature with almost every foreign country, to rest with such inadequate means of enforcing any foreign policy either of protection or redress. Separated by the ocean from the nations of the Eastern Continent, our Navy is our only means of direct protection to our citizens abroad or for the enforcement of any foreign policy.

[December 2, 1872.]

Unless early steps are taken to preserve our Navy, in a very few years the United States will be the weakest nation upon the ocean of all great powers. With an energetic, progressive, business people like ours, penetrating and forming business relations with every part of the known world, a navy strong enough to command the respect of our flag abroad is necessary for the full protection of all their rights.

[December 2, 1873.]

The distressing occurrences which have taken place in the waters of the Caribbean Sea, almost on our very seaboard, illustrate most forcibly the necessity always existing that a nation situated like ours should maintain in a state of possible efficiency a navy adequate to its responsibilities. Congress should provide adequately not only for the present preparation, but for the future maintenance of our naval force.

CHESTER A. ARTHUR.

[December 6, 1881.]

can not too strongly urge upon you my conviction that every consideration of onal safety, economy, and honor imperatively demands a thorough rehabilitation ur Navy.

ith a full appreciation of the fact that this must involve a large expenditure of public moneys, I earnestly recommend such appropriations as will accomplish an which seems to me so desirable.

othing can be more inconsistent with true public economy than withholding the ns necessary to accomplish the objects intrusted by the Constitution to the ional Legislature. One of these objects which is of paramount importance is ared by our fundamental law to be the provision for the "common defense." ly, nothing is more essential to the defense of the United States and of all our le than the efficiency of our Navy.

we heed the teachings of history we shall not forget that in the life of every on emergencies may arise when a resort to arms can alone save it from dishonor.

[December 4, 1883.]

e work of strengthening our Navy by the construction of modern vessels has auspiciously begun.

at our naval strength should be made adequate for the defense of our harbors, protection of our commercial interests, and the maintenance of our national or is a proposition from which no patriotic citizen can withhold his assent.

[December 1, 1884.]

can not too strongly urge the duty of restoring our Navy as rapidly as possible he high state of efficiency which formerly characterized it. As the long peace has lulled us into a state of fancied security may at any time be disturbed, it is n that the policy of strengthening this arm of the service is dictated by considions of wise economy, of just regard for our future tranquillity, and of true reciation of the dignity and honor of the Republic.

GROVER CLEVELAND.

[December 8, 1885.]

ll must admit the importance of an effective navy to a nation like ours. Yet we e not a single vessel of war that could keep the seas against a first-class vessel any important power. Such a condition ought not longer to continue. The nation t can not resist aggression is constantly exposed to it. Its foreign policy is of essity weak, and its negotiations are conducted with disadvantage, because it is in condition to enforce the terms dictated by its sense of right and justice.

BENJAMIN HARRISON.

[December 9, 1891.]

hen it is recollected that the work of building a modern navy was only initiated he year 1883; that our naval constructors and shipbuilders were practically with- experience in the construction of large iron and steel ships; that our engine s were unfamiliar with great marine engines, and that the manufacture of steel ings for guns and plates was almost wholly a foreign industry, the progress that been made is not only highly satisfactory, but furnishes the assurance that the ted States will before long attain in the construction of such vessels, with their ines and armaments, the same preeminence which it attained when the best rument of ocean commerce was the clipper ship, and the most impressive exhibit naval power the old wooden three-decker man-of-war. The officers of the Navy the proprietors and engineers of our great private shops have responded with derful intelligence and professional zeal to the confidence expressed by Congress s liberal legislation.

here should be no hesitation in promptly completing a navy of the best modern , large enough to enable this country to display its flag in all seas for the proion of its citizens and its extending commerce. It is essential to the dignity of nation and to that peaceful influence which it should exercise on this hemisphere its Navy should be adequate, both upon the shores of the Atlantic and of the fic.

[December 6, 1892.]

earnestly express the hope that the work which has made such noble progress not now be stayed. The wholesome influence for peace and the increased sense

of security which our citizens domiciled in other lands feel when these magnif ships under the American flag appear is already most gratefully apparent. United States is again a naval power.

While the genius of our institutions has ever been and still is opp to a large standing army, yet our geographical situation, fronting, a do, on two great oceans and the Mexican Gulf, and the peculiar e neous conditions of other nations existing at this time in said Gulf in the Caribbean Sea and on the North Pacific Ocean, all conspi render it absolutely necessary that the United States should be, an soon as may be, a great sea power.

While the reasons for this logical and inevitable national outc have frequently heretofore elsewhere and by others been ably st yet it would seem that nowhere nor by any one have they been clearly demonstrated, and in more intelligent detail, than in a rem ably suggestive paper entitled "A Twentieth Century Outlook," wri by Capt. A. T. Mahan, United States Navy, and published in Har Monthly Magazine for September, 1897, wherein, among other thi that able writer and standard author says as follows, to wit:

On the side of the sea there is no state charged with mightier responsibilities the United States. In the Caribbean the sensitive resentment by our people o supposed fresh encroachment by another state of the European family has bee plainly and too recently manifested to admit of dispute. Such an attitude of demands of the United States to be ready to support it by organized force, ex as the mutual jealousy of states within the European continent impose upon the maintenance of their great armies, destined, we believe, in the future to ful noble mission.

Where we thus exclude others we accept for ourselves the responsibility for which is due to the general family of our civilization; and the Caribbean Sea, its isthmus, is the nexus where will meet the chords binding the east to the the Atlantic to the Pacific.

The Isthmus, with all that depends upon it—its canal and its approaches on e hand—will link the eastern side of the American continent to the western as no work of land communications ever can.

In it the United States has asserted a special interest. In the present she maintain her claim and in the future perform her duty only by the creation of sea power upon which predominance in the Caribbean must ever depend.

In short, as the internal jealousies of Europe and the purely democratic instit of the levée en masse—the general enforcement of military training—have prep the way for great national armies, whose mission seems yet obscure, so the gr broadening and tightening hold upon the sentiment of American democracy of conviction, loosely characterized as the "Monroe Doctrine," finds its logical, itable outcome in a great sea power, the correlative in connection with that of Britain of those armies which continue to flourish under the most popular instit despite the wails of economists and the lamentations of those who wish without paying the one price which alone has ever insured peace—readiness for

These views of this experienced sea captain and intelligent stu of national and international events, past and current, reciting, as do, valid reasons why the United States must in the very near fu become a great sea power, are further elaborated and exemplifie him with marked ability and clearness, and illustrated with an inst tive and accurate chart of the Gulf of Mexico and the Caribbean showing the sea routes from New York, mouth of the Mississippi, Europe, to Colon, on the Isthmus of Panama, and from the Atl to the mouth of the Mississippi River, in an article entitled " strategic features of the Gulf of Mexico and the Caribbean S printed in Harper's Monthly Magazine for October, 1897.

These two able articles, instructive not only for what they exp but also for what they suggest, or that which may readily be ded therefrom, should be read and carefully studied, not only by e member of the present Congress, but also by the President of United States and every member of his Cabinet, for they constitut

national study of a very high order, worthy of the greatest ıal consideration possible, especially at this time, in view of our ar relations, which, with those foreign powers which now control rt the approaches to said Gulf and sea, and which have large sts on both of said oceans, and whose respective sea powers ly exceed our own in said waters. The length of these two arti- one precludes their reproduction by this council in this statement. ıy of the matters recited in this statement, which relate to dry , being corroborated and confirmed in an able article written for Vashington Evening Star and printed August 21, 1897, and in ıf its appositness, this council now reproduces the same, as follows:

ITISH DOCK—AT HOME IN THE WATER, BUT CAN'T GET OUT OF THE WATER AT t—THE BATTLE SHIP INDIANA AT HALIFAX—THE NEED OF MORE DOCKING LITIES FOR THE UNITED STATES NAVY—AT A DISADVANTAGE IN WAR.

Indiana is the largest ship that has ever been docked at Halifax, and the ants of that quaint old town are making much of the occasion. Two years ı Haligonians rejoiced in the report that the *Indiana* could be prepared for her speed trial only by docking at Halifax; but for political reasons the ship ran ırse with a foul bottom, and, in the name of patriotism, her builders had to of the other quarter knots and the added bonus she would certainly have had she been properly slicked. After a venturesome effort and a favoring ı to speak, the craft was docked at Port Royal; but the single experiment l. and to-day our ship is in a British dry dock.

naval weakness of the United States at present is in her lack of efficient dock- cilities, and no matter how strong may be our line of battle, we shall be ly handicapped so long as we are minus docks of sufficient size and strength dle the largest of our ships. In case of war with Great Britain, the Halifax rould be closed to us, of course, while in the event of trouble with another the laws of neutrality would deny that dock to us except our ships were in a sinking condition.

THE HOMELESS INDIANA.

Indiana, which is one of the Navy's most powerful battle ships, has been in ter for the past sixteen months. It was proposed some weeks ago to dock the dry dock No. 3 at the navy-yard, New York, but the mishap to that struc- eclnded that; next the Department turned its attention to the dock at Port S. C., but Rear-Admiral E. O. Matthews, Chief of the Bureau of Yards and strenuously objected, fearing lest the structure might give way under the s weight and wreck her then and there. Finally Halifax was resorted to, and overnment is paying a very pretty figure to the company in control of that

it not been for the danger of permanent injury to the ship, the Department have kept the *Indiana* in the water till the work on the New York dock was d, but Chief Constructor Hichborn urged that any further delay in cleaning ıinting the vessel would result in damaging her bottom plating, while the cost of propulsion, owing to her fouled bottom, would grow well-nigh daily. ıited States owns but eleven docks for the accommodation of its naval ves- ıd at present the Puget Sound dock is the only one available for handling a ship.

THE UNITED STATES DOCKS.

following table gives the size and cost of our docks:

Station.	Cost.	Capacity.
		Tons.
ıuth, N. H	$732,905.00	1,500
Mass	927,717.29	3,500
rk	2,003,498.05	5,000
	595,019.24	8,000
	548,205.22	12,000
Island, Pa	548,700.00	8,000
, Va	943,676.00	3,000
	501,980.76	8,000
ral, S. C	430,915.67	12,000
land, Cal	2,772,322.08	10,500
ound	608,812.81	12,000

To the foregoing statement of cost $100,000 should be added for the repairs of Dock No. 3 at New York; $60,000 for projected modifications to dock at League Island, Pa.; $20,000 for repairs of Dock No. 2 at Norfolk, in addition to others just completed costing $12,000, and $18,521.42 paid builder of Port Royal dock for loss and damage due to cyclone of August, 1893.

In substance, then, the United States has eleven dry docks, including one balance floating dock at the Portsmouth Navy-Yard, which is limited in its capacity to vessels of 1,500 tons—craft of the gunboat type. Of the ten docks of large capacity four are of masonry, five are of timber, and one, that at Puget Sound, is of timber with a masonry entrance. All of these are practically ready for use at present, except the large new timber dock at New York.

THE LACK OF DOCKING FACILITIES.

The first dry docks constructed for the Navy were those of granite masonry at Boston and at Norfolk. Next was built the granite dock at New York, and then the granite dock at Mare Island, California. All built in recent years have been wholly or chiefly of timber; and the result can not be said to be entirely or radically satisfactory. Of the masonry docks, dating from 1834 down to 1891, only one, the New York dock, has had any considerable repairs; while the timber dry dock just completed at New York is undergoing repairs amounting to a cost of $100,000, and the timber dock at Norfolk and the timber dock at League Island will have cost nearly the same lump sum to put them in condition as intended.

In a few months we shall have eleven serviceable dry docks, but at present the only dry dock owned by the United States Government into which the largest of its battle ships can be placed is that at Puget Sound, on our extreme northwestern boundary. Out of four completed battle ships of the first class, only one is on that coast. The Puget Sound dock is the largest in the Western Hemisphere. It has a fine masonry entrance, and would have been constructed entirely of masonry and concrete had the appropriation so permitted, but the allowance was too small. When the timber portion requires renewing, the masonry and concrete entrance and abutments, with the caissons, will constitute a cofferdam, and the entire interior can be renewed in concrete, making it one of the finest docks in the world.

GREAT BRITAIN'S DOCK EQUIPMENT.

While we have only ten servicable docks in the United States Great Britain has six fine dry docks at our very door, which she controls through ownership by her colonies, by subsidies, or otherwise. Five of these are right on our northern boundaries, and are at Vancouver, British Columbia; Kingston, Ontario; Quebec, Quebec; Halifax, Nova Scotia, and St. Johns, Newfoundland. Four of these are fine, substantial masonry structures.

In England Great Britain has about fifty dry docks and locks in which she can dock her naval vessels, and about twenty more are scattered over the world wherever they will do the greatest good. She has more docking facilities in either of the dock yards of Chatham or Portsmouth than we have throughout our entire country.

France has more than thirty dry docks, and at Brest alone her docking establishment exceeds our total aggregation.

The docks of the United States are on an extended coast line, and only two of them are on the broad reaches of the Pacific Coast.

WHAT WE NEED.

A naval expert, speaking of the matter, said: "We need additional dry docks of the most substantial kind and material—docks into which the heaviest and most costly of vessels may be placed with absolute safety and without the constant expense of incessant pumping. We need more docks and better ones than those built in the last decade. The Government began well in the early years of this century, but it has got down now to a day of cheap things and to a condition no other first-class power would tolerate."

The great dry dock building at Bremerhaven was subsidized by the German Government only on condition that it be built of stone, instead of wood, as was originally proposed.

There can be no question as to the intimate connection between numerous docking facilities and an efficient navy, and if the matter be considered only in the light of the cost of coal and the added expense of propulsion with a foul bottom, again we must have more docks. One way or the other we need them, and the instance of an American battle ship in a British dock in times of peace points instructively to our danger in times of trouble.

There is a patriotic and also a very practical side to the question, and may both strike home.

These views are further supported in an article published in the New York Herald—editorial of September 3, 1897—and reproduced in the Baltimore American of September 5, 1897, in words as follows:

VIEWS OF LEADING NEWSPAPERS ON NAVAL DRY DOCKS.

[From the New York Herald.]

Among other necessities of naval strength is the possession of dry docks, floating or stationary, in which the heaviest battle ships existing or contemplated may be placed for repairs or for the periodical cleaning demanded by unsheathed underwater bodies. When Congress was aroused to the importance of these demands the constructions authorized were inadequate in number, bad in location, and poor in design. Through a mistaken economy timber docks were provided, and considerations of cheap production and speedy construction were allowed to initiate a policy that has had an unhappy issue. The cheapness sought has proved most costly, and the speediness promised has resulted in delays so humiliating that besides the *Indiana* the other battle ships of the eastern seaboard may have to seek alien docks.

Intelligent appreciation by legislators and courage of opinion in naval officers would in the beginning have made impossible the temporary makeshifts with which we are burdened. Instead of timber docks our naval stations might have yawned with such solid, stable works as may be found abroad. In French Mediterranean ports docks abound adequate to the necessities of a great fleet, and in the north may be seen works which justify the promise made when Napoleon I. declared he would renew in Cherbourg the marvels of Egypt.

Our futile structures should be replaced by enduring works, laid down at ports difficult of attack, but easy of friendly approach in any state of the tide; and these should be supplemented by floating docks, which may be moved from point to point, may be able to lift our largest vessels, and notably may be ready to afford aid to ships that, owing to disablements increasing their normal drafts of water, can not be taken over the sills of stationary docks.

The following extracts from the Baltimore American of September 12, 1897, relating to this subject are reproduced by this council as follows:

The only United States dry dock now available for the largest battle ships of the White Squadron is that at Puget Sound, on the extreme northwestern boundary, which is the largest in the western hemisphere. It is 650 feet long, and over 92 feet wide at the gate, with a depth over the sill of 30 feet. Ships of 12,000 tons can be docked in it.

AT WORK ON THE CRUISERS.

Unusual activity prevails at this time in the New York Navy-Yard at Brooklyn, and evidences of the summer work there show in the neat new appearance of the cruisers *Cincinnati* and *Detroit*. Their hulls are snowy white with new paint, their brass work highly polished, and the general appearance of them is attractive. The *Cincinnati* has been completely overhauled, but her equipment is not yet complete. The *Detroit* is nearly ready for sea service. The double-turreted monitor is now undergoing repairs to her machinery. Repairs on the big dry dock are being pushed under constant orders from the Navy Department, and $100,000 will be spent on this work alone. The necessity which compelled the Government to dock the *Indiana* in a British yard at Halifax has apparently stirred the authorities by showing the plight in which the Navy might find itself in the event of foreign invasion. Public discussion of the need of new dry docks for the vessels of the Navy has had the effect of hastening all work in the navy-yard at Brooklyn.

Again, the Baltimore Sun of September 30, 1897, in a special dispatch from Washington, recites as follows:

DOCKS IN BAD CONDITION—NAVAL BOARD FINDS THEM DISTORTED, LEAKY, AND ALTOGETHER INADEQUATE FOR THE SERVICE.

Washington, September 29.—Some startling and disappointing disclosures to the public and the Navy will be made when the full report of the special board considering the subject of dry docks is submitted to the Secretary of the Navy, within a few weeks. This board will assemble to-morrow at the New York Navy-Yard by direction of Commodore Bunce and begin a discussion of the last phase of the subject, that relating to timber docks, its work up to the present time having been confined to the advantages of concrete and floating docks over the prevailing type.

The public will soon hear that the docks the Navy has are in a dangerous condition, and, with the possible exception of that at Puget Sound, may collapse at any time. It will be shown that they are badly distorted, weak, leaky, and some have quicksand foundations. These statements will be substantiated by reports made by civil engineers who have investigated the docks. This means that Congress will be called upon next session to authorize large appropriations extending into the hundreds of thousands in order to place the docks in proper condition.

Commodore Bunce, Commander Chadwick, and Constructor Dashiell, the members of the board, have before them now the problem of whether, in view of recent developments, the Navy should longer undertake the building of timber docks. At the meeting in New York to-morrow this question in all its phases will be considered. All the docks referred to have been built since the new Navy was started, and most of them within the past five years. These docks are located at the New York Navy-yard, where two are completed and a third is being repaired; another at League Island; one at Norfolk, and one at Port Royal. That at Puget Sound is better built, and so far gives no signs of weakness. Every one of these is of timber, and each cost the Government between $500,000 and $700,000.

"We have a Navy," said a leading expert to-day, "but I would like to know what will become of it unless the country gives it proper docking facilities. The dock is as essential to a ship as a doctor is to a sick man. When a vessel requires overhauling and her bottom scraped and painted, the longer the delay the worse it is for the ship and the appropriations. The regulations of the Navy say that every ship shall be docked at least once in nine months, but with only one dock on which we can depend, I realize that if the home fleet was badly battered in a gale and docking was necessary, we would be in a bad way to accommodate all the ships. It is a good thing Secretary Long has taken up this docking business, and a public service will be rendered when our docking system is brought up to the requirements of even the present Navy."

Again, the Washington Post of October 1, 1897, recites as follows:

REPAIRS FOR TIMBER DOCKS—NAVAL BOARD TO RECOMMEND THAT WORK BEGIN ON THEM AT ONCE.

New York, September 30.—A special meeting of the Naval Dock Board was held to day at the Brooklyn Navy-Yard to consider the reports as to the disabled conditions of all but one of the timber structures owned by the Government. A complete examination by the engineers has revealed the above startling information, and the only exception is the timber dock on Puget Sound. As the timber docks practically do all the work of the Navy, the stone structures being used for the smaller vessels, the Department regards the existing conditions with considerable apprehension, and it will be the duty of the dock board to report on the subject, and suggest the best way for repairing docks. None of the members of the board would talk for publication to-day, but it is understood that an estimate of the cost of repairs, together with the recommendation to proceed at once with the work, will be forwarded to the Department. Commodore Bunce, the commandant of the station, is president of the board.

Engineers have estimated that it will cost at least $500,000 to put the timber docks in condition, and the dock board is expected to recommend that this money be spent on the structures at New York, League Island, Norfolk, and Port Royal. There is a separate appropriation for dock No. 3 at the Brooklyn yard.

Again, the Baltimore Sun of October 5, 1897, recites as follows:

The full report of the special board considering the dock question will be submitted to the Navy Department this week, and in it will be some recommendations requiring, if they are carried out, an appropriation of about $600,000 to repair the timber docks now belonging to the Navy. The Norfolk dock will require $200,000 to place it in condition. The League Island dock and the second dock at New York will call for the expenditure of $100,000 each, while that at Port Royal will require $150,000.

The importance of these matters has been still further recited in an article published in the Army and Navy Register, August 21, 1897, as follows:

OUR DRY-DOCK SYSTEM.

The subject of dry docks is to receive the careful attention of the naval officials. The unfortunate condition which necessitated the Government's being forced to ask permission of the Halifax dock officials to dock the *Indiana* there has forcibly

, but none capable of taking the battle-ship class from the water. New will probably also be recommended as a place where a dock should be estab- m account of the fine harbor and safe entrance. There is no further room at York yard for another dock, but as that station is now the most important he Navy, the board is expected to urge that a floating dock should be estab- omewhere near Tompkinsville, in which all types of vessels could be docked. now no naval floating dock in the country, but members of the board are it that they are not only practicable, but essential to the service. The League Navy-Yard, the board will report, has not the water facilities to recommend dock, and the same recommendation will be made against the Norfolk yard, here is a narrow channel leading from the river, with scarcely sufficient water large cruiser class. At Port Royal, S. C., the board will recommend that an iation already granted by Congress be immediately used to dredge a safe e to the sill of the dock, in order that the Navy may be no longer deprived of of the only dock now on the Eastern coast large enough for the battle ships. f that there is not a harbor suitable for the location of a dock. Algiers, La., as been recommended by previous boards as presenting greater advantages than any other Gulf point, has been declared by engineers unfitted by reason oggy nature of the land.

le it is neither the province nor the intention of this council to te any invidious discrimination between Round Bay and other ies heretofore or which hereafter may be selected as suitable loca- hereat the United States should construct new granite dry docks, avails itself of the opportunity of reproducing these publications te attention to what is therein stated as to those localities which leged to present constant factors of disadvantage for dry dock ies—disadvantages which do not and can not exist at Round Bay— ver the recommendations of this council as herein recited shall een fully executed, and because a dry dock at Round Bay con- d of granite or of granite and concrete, as the case may be ever this proposed river and harbor improvement shall have been ted), would have the advantage of being situate not only not on in Atlantic Coast, a frontier line so far as other nations are con- , nor even on the shores of the main Chesapeake itself, but on trary would be situate on the most convenient and advantageous the Chesapeake Bay, accessible by water at all times and at all of tide, free from ice, easily reached by rail from all points of the

DAFS NOT CIRCULATE

FLOATING DOCKS.

Besides the very great advantages possessed by Round Bay where to construct a permanent granite dry dock, it and the entire Seve River possess special advantages as furnishing a suitable and eligil place whereat to establish a floating dock, equal in all respects to a similar docks established either at Cardiff, in South Wales, or at No Shields, or at Newcastle-upon-Tyne, in England, or at any otl place in England, Scotland, or Wales.

The largest floating dock of its kind in the world, now being c structed for the port of Olangapo, in the Philippine Islands, is 450 f long, 117 feet wide over the pontoons, and 38½ feet deep. It will r on 6 iron pontoons, each 14 feet deep, so constructed that they may removed separately for repairs.

Olangapo is situated in the eastern part of Port Subic, on the w coast of the island of Luzon, the principal of the Philippine Islan under the jurisdiction of Spain.

The approximate geographical position of Olangapo is 14° 48′ no latitude and 120° 15′ east longitude.

This council calls attention to two certain notices relating to t subject published, one in the Washington Star of September 28, 18 and the other in the Baltimore American of September 29, 1897, follows:

[From the Washington Star, September 28, 1897.]

FIVE NEW DRY DOCKS—URGENT NEED OF THE NAVAL ESTABLISHMENT—REPORT THE SPECIAL BOARD APPOINTED TO INVESTIGATE THE SUBJECT.

The special board appointed by the Navy Department to consider the need of dry docks submitted its report to Acting Secretary Roosevelt to-day. The boar composed of Commodore Bunce, Commander Chadwick, Constructor Dashiell, Civil Engineer Parks, recorder.

The board finds that five new docks are urgently necessary, while one, the l Royal dock, should be immediately enlarged. The cost of these docks, with Port Royal improvement, is estimated at $5,775,000. Four of the docks should b concrete, namely, at Boston, 700 feet long; cost, $1,300,000; at New York, 500 long; cost, $1,200,000; at Norfolk, 500 feet long; cost, $1,100,000 (lengthening s dock, $250,000); at Mare Island, 500 feet long, $1,100,000. Each of these conc docks is to be completed in two years. At Algiers, near New Orleans (with Gal ton or Pensacola as alternatives), it is proposed to place a steel floating dock wharf. This would cost $750,000, and could be completed in ten months.

The board also recommends docks at the following-named points, to place the d ing facilities of the country on an adequate footing: New London, fresh-water b and dock connecting with river, $1,000,000, in two years' time; Newport News, s floating dock and moorings (alternate to Norfolk concrete dock), $650,000, in months; Tortugas, steel floating dock and moorings, $650,000, in ten months; mal a total cost of estimated supplementary work, $5,300,000.

STRATEGIC CONSIDERATIONS.

In support of its recommendations the board speaks as follows of the strateg considerations which have influenced it: "We are, from a naval point of view, w in comparison with the great naval powers of Europe, and the naval strengt Japan is growing so rapidly that within a year or two she will also overmatch u available strength in the Pacific. Every effort is then necessary on our part t least retain command of the sea on our own coasts and to supplement our n strength by providing accessible places for repair and docking and by fortificat so located that when our squadrons are pressed by a superior force they may use t as supports in holding the approaches to our coasts. So long as an enemy is c pelled to draw all of his supplies from his home stations his operations mus limited by the necessity of holding his communications clear and the quantit supplies he can transport in his ships under the protection of his fleets. If he r be prepared to meet upon arrival on our coasts even a much weaker naval force, compactly in hand, with repair and supply facilities near, we can retain the comm of the sea on our coasts and render impossible its occupation near our comme centers."

COST OF CONSTRUCTION.

regard to the cost of construction the board says that it would appear that the of a steel floating dock and a timber graving dock of equal capacities would be ly equal, but that the time of construction is in favor of the steel dock in the of about 7 to 12. The concrete dock, under the same conditions as the timber , would cost from 50 to 75 per cent more and the time of construction would 0 per cent greater. In the opinion of the board, the cost of a granite dock ld be about double that of a concrete dock. For all the docks a depth of 30 feet iggested over the sill as being in all probability the maximum draft of any el, even in the out-of-trim condition produced by collision, accident, explosion, unpowder.

conclusion, the board expresses the conviction that all Government docks ld be of a permanent character and their readiness for use at all times be assured ıy cost.

specting the recommendations of the board as to another dock at Mare Island, known to be the intention of the Navy Department to reject the suggestion es it can be assured that some more battle ships are to be built on the Pacific t. The board will be kept together for more work in the same line. Captain lwick is going to Europe, so he has been relieved, and his place on the board be taken by Civil Engineer A. G. Menocal. The board will then at once, under nstructions of Acting Secretary Roosevelt, proceed to examine the condition of xisting timber docks of the Navy, and will also look into the condition of the er dock at New York, with a view to strengthening it by adding an entrance of rete.

[From the Baltimore American, September 29, 1897.]

E NAVY IN NEED OF NEW DRY DOCKS—IMMEDIATE CONSTRUCTION OF FIVE RECOMMENDED BY THE SPECIAL BOARD.

ashington, September 28.—The special board appointed by the Navy Department onsider the needs of the Navy in the matter of new dry docks has submitted its rt to Acting Secretary Roosevelt to-day. The board is composed of Commodore ce, Commander Chadwick, and Constructor Dashiell, with Civil Engineer Parks ecorder. The board finds that five new docks are urgently necessary, while one Port Royal, S. C., dock) should be enlarged immediately. The total cost of e docks, with the Port Royal improvement, is estimated at $5,775,000. Four of e docks, the board says, should be of concrete, namely, at Boston, 700 feet long, $1,300,000; at New York, 500 feet long, cost $1,200,000; at Norfolk, 500 feet , cost $1,100,000 (lengthening stone dock, $250,000); at Mare Island, 500 feet long, 0,000. Each of these concrete docks is to be completed in two years.

Algiers, near New Orleans (North Galveston or Pensacola as alternatives), it is osed to place a steel floating dock and wharf. This would cost $750,000, and d be completed in ten months.

addition to these, the board recommends docks at the following points, which, gh not in the nature of emergency docks, are required to place the docking ities of the country on an adequate footing: New London, fresh-water basin and ing connecting with river, $1,000,000, in two years time; Newport News, steel ing dock and moorings (alternate to Norfolk concrete dock), $650,000, in ten ths; Tortugas, floating dock and moorings, $650,000, in ten months; San Fran-, concrete dock on Yerba Buena Island, 700 feet long, $1,500,000, two years; Pedro, concrete dock, 700 feet long, $1,500,000, in two years—making the total of this estimated supplementary work $5,300,000.

me of the improvements recommended are contingent upon compliance with in conditions—for instance, at Norfolk, upon channel improvements; at San cisco, upon survey of Yerba Buena Island; at Mare Island, upon channel improve ts; at San Pedro, upon harbor improvements.

Newport News the board reports that the shipbuilding company there contem- e building a second large dry dock, and is willing to enter into any agreement the Government as to its use, being governed also by the wishes of the Depart- as to dimensions and material.

e work outlined above seems to be very extensive, but the board says that, with e additions it proposes to the number of our dry docks, we still would have for l purposes on our entire coast line only one more dry dock than has Great Britain e of its navy-yards—Portsmouth, England. At present the United States has al of eleven naval dry docks, only one of which at this time—that at Puget d, Washington—can take in our battle ships.

support of its recommendations the board speaks as follows of the strategical derations which have influenced it: We are, from a naval point of view, weak mparison with the great naval powers of Europe; and the naval strength of Japan

is growing so rapidly that within a year or two she will overmatch us in avail strength in the Pacific. Every effort is then necessary on our part to retain c mand of the sea, at least on our own coasts, and to supplement our naval strengt providing accessible places for repair and docking, and by fortifications so loc that when our squadrons are pressed by a superior force they may use them as ports in holding the approaches to our coasts. So long as an enemy is compelle draw all of his supplies from his home stations, his operations must be limite the necessity of holding his communications clear and the quantity of supplie can transport in his ships under the protection of his fleets. If he must be prep to meet upon arrival on our coasts even a much weaker naval force, held compa in hand, with repair and supply facilities near, we can retain the command of sea on our coasts and render impossible its occupation near our commercial cen

Should it prove true that the Secretary of the Navy will submi Congress at its next session the report of said board, and recomm that an additional dry dock should be constructed at each of the lo ities named in said two articles, notwithstanding the fact that at e of four of said named places there are now already established manent dry docks—in fact at three of said places, to wit, Boston, N York, and Norfolk—there are already two permanent dry docks es lished at each, one being of granite and one of timber, as hereinbe recited. Then, too, even in that event, this council respectfully subr that said facts should not successfully militate against the establ ment of a granite dry dock at Round Bay or eliminate its useful therefor, but on the contrary this council respectfully maintains t Congress should establish a dry dock at Round Bay, and thereby only take cognizance of the very great special, if not superior, ad tages possessed by Round Bay and Severn River whereat to estab a great national dry dock at this suitable site therefor along our Atlan Coast frontier line, but at the same time to declare a national polic more equitably distributing geographically the advantages wh always should accrue to the country at large whenever these gr national public works are more equitably distributed, and especi when they involve, as they will eventually in these cases, an expe ture all the way from five millions to fifteen millions of dollars of public moneys.

NATIONAL ARMOR PLANT.

This council also respectfully submits that Round Bay also posses for the reasons herein recited, special advantages whereat to loc and establish a national armor plant, provided Congress shall de mine to embark upon such a governmental policy. But as Sparr Point Steel Works, near Baltimore, already in successful operati furnish an admirable plant for our Government to begin with, sho title to it be duly acquired by the United States, then and in that ev there would not at least be the same necessity to establish an additio armor plant at Round Bay.

It would seem that the steel plant at Sparrows Point has b recently visited by the United States naval board charged with duty of preparing a report thereon to be submitted by the honor Secretary of the Navy to Congress at its next session, as appears fi an extract from the Baltimore Sun of September 21, 1897, as follo

TO LOCATE AN ARMOR PLANT—SPARROWS POINT STEEL WORKS INSPECTED FOR NAVY DEPARTMENT BY A BOARD OF EXPERTS.

On invitation of the Maryland Steel Company the Government armor fac board came from Washington yesterday and visited the large plant of the com at Sparrows Point.

, a director of the Pennsylvania Steel Company. In Baltimore they were
Mr. E. C. Felton, president of the Pennsylvania Steel Company, and Maj.
ent, former president of the company and chairman of the executive board.
riving at Sparrows Point the party was welcomed by Mr. F. W. Wood, presi-
the Maryland Steel Company, and Mr. R. K. Wood, general agent of the
ıy. The observation car of the company was in waiting and the party
i it. After making a circuit of the works they arrived at the shipyard.
were shown through the drafting room, the fitting-out shops, and the mechan-
he immense hydraulic shears was explained. From the ship plant the visitors
ken to the restaurant for dinner, which was served by Caterer Harris.
e afternoon the board was shown through the furnaces, the mill, and the Bes-
vorks. For the first time during their tour through the different plants they
iven an opportunity to see the full operation of making rails. They first
at Furnace C, and after seeing a blast made followed it through the mill and
aightening department, and finally saw the rails loaded on a car.
members of the board expressed themselves much pleased with the plant.
sturned at 5 p. m. to Washington.
plant at Sparrow's Point, it is stated, is especially adapted for the location of
ıor plant. The tract on which the armor plant would be placed includes the
hipyard and about thirty acres additional. This would leave the steel-rail
till in the hands of the company. The proximity to deep water, access by
ıding trunk lines, nearness to the steel plant and to the laborers of a large
among the especial advantages suggested. The ground is peculiarly well-
for the carrying of heavy apparatus without the necessity of piling or laying
dations of excessive size or dimensions. It is also an excellent point for the
ling of materials.
nportant advantage is the ease of defense in case of an attack by a hostile
owing to the fact that Baltimore can only be approached through a long ship
l.

in, the Baltimore Sun of October 1, 1897, referring further to this
subject-matter, recites the very great advantages possessed by
tate of Maryland, on account of its water facilities, wherein to
a permanent national armor plant in the event Congress shall
a policy of owning its own armor plant, and in an article as
s:

RN ARMOR PLANT—THE OBJECTIONS OF EXPERTS TO A GOVERNMENT FOUN-
IN THAT SECTION DO NOT APPLY TO MARYLAND—SUPERIOR ADVANTAGES
OFFERED BY THIS STATE—IT HAS FACILITIES FOR THE TRANSPORTATION BY
R OF THE HEAVY PLATES TO THE YARDS OF THE SHIPBUILDERS—NAVY

DO NOT CIRCULATE

heavy plates, can be secured, and the fact that labor is cheaper there is another advantage some officials point out for the establishment of a plant at some other point than north of the Virginia line. Colored labor is now extensively used at Newport News in building the three battle ships there, and has proven a success. It was used to a large extent on the three gunboats constructed there, and, while not of a skilled type, served the purposes of the company.

Sparrows Point, Birmingham, and a place in Tennessee, it is urged, present advantages for the establishment of an armor plant which should have great weight with the special board in reaching its conclusions, and the fact that the board is to go South before drawing up its recommendations has been accepted at least as encouraging to the advocates of that section. A delegation from the South some weeks ago made an earnest plea to the Department to have a certain plant near Nashville inspected, and held out liberal inducements to the Government to establish an armor factory in that State.

The promoters of Maryland as an advantageous point for the plant have been less active, and, apparently, are willing to leave the selection entirely to the board without attempting to influence its judgment. It is freely stated at the Navy Department that when it comes to considering the South as a locality for a plant Maryland presents advantages over any other section. These are its water facilities for the transportation of heavy armor either to Newport News or the Cramps, its contiguity to the big steel and iron mines, and the fact that it is almost between the two leading yards now building the larger ships for the Navy.

Assistant Secretary Roosevelt is an advocate of establishing the plant west of the mountains if the Navy is to undertake the manufacture of its own plates. He thinks armor can be more cheaply made there, and the quality produced would be equally as good as that furnished now to the service. A doubtful problem is that relating to the production of steel ore in the South. There is no question in the minds of the members of the board that the quality is good, but as the output is not so large it has been contended that in an emergency the Navy might find the ore short for its factory.

The Navy, as a rule, is opposed to the Government going into the armor manufacturing business at all, and believes it is the proper sphere of private concerns to furnish the country with the protection for its war vessels. Neither does the armor board approve very strongly of the establishment of the plant. Captain O'Neil, the ordnance chief, opposes the plan, as did his predecessor, Captain Sampson. Secretary Herbert did not like the idea and neither does the present Secretary, but all admit that if the two firms that now have a corner on armor refuse to come to reasonable terms it will be necessary for the Navy to get its own armor in some other way, and as no other firms are capable of delivering it there will be no remedy but to build a plant and make armor.

In considering the armor subject the board is very much embarrassed by the lack of some definite naval policy as to the probable number of ships the service may undertake in the future. It most strongly opposes the building of a great three million dollar plant if Congress is to authorize but one battle ship a year and possibly not that; but if there was a construction policy, such as Great Britain and France outline for augmenting their naval service, and some reasonable idea of the extent to which the Navy would develop in a given period, the board would urge that the Navy supply not only its own armor, but steel for the shell of the ships.

As the whole armor question must come up again this winter in Congress, it is desired by the naval authorities that the fullest available information should be secured in order that both Houses may have for consideration reliable data treating of armor in all its phases. It is recognized by those who have in charge the building of a navy that a most serious obstacle stands in the way of its development by the refusal of the armor concerns to comply with the Government's propositions, and that until a compromise is reached or Congress provides a plant it will be impossible for the country to continue the building of powerful war vessels.

INEQUITABLE DISTRIBUTION OF THE EXPENDITURE OF THE PUBLIC MONEYS OF THE UNITED STATES.

In conclusion this council respectfully invites special attention to the inequitable distribution of the expenditure of the public moneys during the thirty years last past; showing that the large expenditure for supplies for the Army, Navy, and civil service, for building ships, dry docks, manufacturing cannon, rifles, muskets, pistols, and guns generally, gun carriages, ammunition, ordnance and fortifications, maintaining shipyards, repairing ships, and for the construction of public buildings,

and contracts for Government supplies generally, have been chiefly made in Northern and Northwestern States.

This matter has grown so grave that this council is of opinion that the time has fully arrived when the attention of Congress should be directed to the same, with a view of securing a more equitable distribution geographically of the expenditure of the public moneys.

The Baltimore Sun of September 29, 1897, makes reference to this subject generally in an editorial as follows:

ARMOR PLANTS IN THE SOUTH.

Now that it is universally conceded that iron and steel are produced more cheaply in the South than in any other part of the world, it is but right and proper that the proposed armor plant of the Federal Government should be located in Maryland, Alabama, or Tennessee. The South has been too much ignored in the distribution of the indirect benefits of governmental expenditure. Taxes are collected in the South with great promptness, both internal taxes and tariff taxes paid on goods imported through Northern ports, or on domestic goods, whose price is enhanced by duties laid for the benefit of Northern manufacturers. With like promptitude and readiness the outgoing current of money from the Federal Treasury should, as far as possible, be directed by the spending departments in equitable proportions to the sections from which it came. This has been recognized as respects the Pacific Coast and the Northwest, but not as respects the South.

The interest of the Government is of course the first consideration. Contracts should go to the lowest bidder, and Government plants should be located where they will give the best and most economical results. This is the correct general principle. It was not observed when it was provided in an act of Congress that more should be paid per ton for warships built on the Pacific Coast than for those built at Baltimore, Norfolk, or Philadelphia, nor has it been observed in regard to other objects of expenditure. Favoritism has too often decided where contracts and Government plants shall go. Political "pulls" have for many years caused contracts for ships, guns, armor, ammunition, paper, and other supplies to go to certain Northern States. While it is true that the lower price should command contracts, there has not for many years been an impartial attitude toward contractors. The distribution of contracts has been distinctly geographical, sectional, and political, and at the same time decidedly inequitable. Even the manufacturing establishments operated by the Government have been inequitably distributed, all the important ones being located in the North. This has had its effect in delaying the industrial development of the South.

The establishment by the Government of its plant for the manufacture of armor in the South would be strictly in accord with sound principles of economy. It would pay. Armor for warships ought to be made by the Government in the South, because it can be more cheaply made there than elsewhere. This is a solid reason, which can not be ignored. If it could not be made there more cheaply than in the North, but only at the same price, still regard for the principle of equitably distributing Government expenditures would require a Southern location of the proposed plant. Much more, when the South offers the advantages of economy and immunity from attack by sea. Alluding to the demand of Southern representatives that these advantages should now at length be given a tardy recognition, the New York Herald speaks at length of "the great advantages possessed by these States in cheapness of coal, iron, labor, and transportation," and the sentimental plea of "the existing discrimination against the South in the establishment of Government institutions, notably of such as are related to the necessities of naval defense."

The Herald thinks that "the steel workers reared in the North will not like the proposed sites in the South," but the Herald should consider that the preferences of the Northern steel workers are not the main consideration. It forgets also that few of the steel workers at existing plants in Pennsylvania are Americans, but are imported from foreign countries. These imported workmen would as readily go to Alabama as to Pennsylvania. And experience shows that Northern workers have no aversion to good jobs in large private plants now operated in the South.

ESTIMATED COST.

First, of dredging a channel 150 feet wide on the bottom, with side slopes 1 on 3, and 30 feet deep at mean low tide from the Chesapeake Bay to Round Bay, at the head of Severn River, State of Maryland;

and, second, of constructing a granite dry dock on said Round Bay capable of docking any United States naval vessel of the maximum number of tons displacement now built or contemplated to be built, with a tidal basin connected therewith of 1,000 feet square, and of acquiring on said Round Bay land suitable in character and sufficient in acreage to fully subserve all the purposes as herein contemplated.

In reference to the first of these two propositions this council respectfully shows that the officer of the United States Engineer Office at Baltimore, Md., when reporting, on November 5, 1896, to Col. Peter C. Hains, United States Corps of Engineers, on a part of this subject matter, recited as follows:

REPORT OF LIEUT. CHARLES W. KUTZ, CORPS OF ENGINEERS.

BALTIMORE, MD., *November 5, 1896.*

COLONEL: Pursuant to your verbal directions, I have the honor to submit the following report, based upon that clause of the river and harbor bill of June 3, 1896, which directs a "survey to be made and the cost of the improvement to be estimated at Annapolis Harbor, Maryland, with a view to straightening, widening, and deepening the channel of the entrance to said harbor so as to obtain a ship channel one hundred and fifty feet wide and twenty-eight feet deep at mean low water from Chesapeake Bay to the wharves of the United States Naval Academy in said harbor."

On October 19, 1896, I proceeded by tug to Annapolis and made the required examination. The harbor of Annapolis runs southeast to northwest, with a fairly straight ship channel through it 19 feet deep at mean low water. Opposite the Naval Academy wharves there is a deep pocket, with a minumum depth of 29 feet, which extends thence to a point due south of the wharf of the naval ordnance proving ground. This deep water is separated from the deep water of the bay by two broad bars, which in turn are separated by a deep-water pocket with 25 feet of water in it. The latter is caused by Greenberry Neck, which projects into the harbor and causes a contraction of the waterway. Greenberry Neck is wearing away very rapidly, probably at the rate of 15 feet a year, 30 feet or 40 feet having disappeared in two recent storms.

A dredged channel through such soft material would require easy side slopes, say one-third, and a certain amount of annual dredging for maintenance; but all who have ever examined this harbor agree in recommending dredging as the proper means of improvement.

I would recommend that the outer portion follow a line parallel to the Tolley Point bar, leading 35 degrees west of north. This would make a cut 3½ miles long, and, with side slopes of one-third and an allowance of 1 foot for filling in behind the bucket, would require 1,070,000 cubic yards of excavation, scow measurement, or 1,070,000 cubic yards, at 12 cents per cubic yard, $128,400. Allowing 10 per cent for contingencies, the estimated cost of the improvement becomes, in round numbers, $142,000. It is thought that an annual appropriation of $5,000 would be ample to maintain such a channel, and possibly it could be maintained for considerably less.

Now, the aforesaid estimated cost of $128,400 was to secure a continuous ship channel 150 feet wide on the bottom, with side slopes of 1 on 3, and 28 feet deep at mean low water for a distance of 3½ miles, where the average depth of water at mean low tide was 20 feet at the date of said report.

To secure a ship's channel of the same width and similar side slopes for the same distance and 30 feet deep at mean low water, would cost an additional sum equal to one-fourth of $128,400, to wit, $32,100, which added to $128,400 would aggregate $160,500, to which adding 10 per cent for contingencies, to wit, $16,000, would make a grand aggregate sum of $176,500.

But this distance of 3½ miles for which this last estimate of costs was so made is one-third of the distance from Chesapeake Bay via the Severn River to Round Bay—which distance is about 10½ miles—and the conditions being similar and the data being identical, this council therefore respectfully submits that the total cost of dredging a ship's channel of 150 feet wide on the bottom, with side slopes 1 on 3, and 30 feet deep at mean low water, from Chesapeake Bay via the Severn River

ving of one-sixth in costs, or a total saving of $88,250, thereby
ıg said costs of dredging to $441,250.

council therefore respectfully submits that this work of dredg-
ı safely be estimated to cost a sum not to exceed $500,000.

ıd.—The only information this council now has relative to the
' constructing granite dry docks on our Atlantic Coast is limited
costs of constructing granite dry docks at Boston, New York,
rfolk, in the United States, and at Halifax, Nova Scotia. Their
re as follows:

sts of granite dry dock at—	
on	$972,717.29
York	2,003,498.05
olk	943,676.00
fax, Nova Scotia	750,000.00
Total costs of said four granite dry docks	3,669,891.34
Average cost	917,467.83

ıtion is called to the fact that while the granite dry dock at
ork, which is only 369 feet long, with 24 feet of water over its
st $2,003,498.05; the granite dry dock at Halifax, Nova Scotia,
is 600 feet long, with 30 feet of water over its sills, cost only
0.

s in this British dry dock at Halifax, Nova Scotia, where was
in August, 1897, the United States battle ship *Indiana*, and
ıing the alleged damages sustained by said vessel, while being
locked, there has been more or less adverse comment in the
press.

ew of the extensive quarries of excellent granite on the Susque-
River, with all-water carriage thence to Round Bay, and other
s of first-class granite in Howard and in other counties of Mary-
close proximity to railroads, all within cheap transportation to
Bay, this council respectively submits that it may be within
its of safety to estimate that the total cost of constructing such
te dry dock at Round Bay will not exceed the sum of $900,000.

DOES NOT CIRCULATE

SUMMARY OF COSTS.

Dredging the Severn River	$500,000
Constructing granite dry dock	900,000
Constructing tidal basin	80,000
Property	20,000
Total aggregate cost	1,500,000

This council, therefore, respectfully submits that the total aggregate costs of all said improvements will not exceed the sum of $1,500,000, which sum this council now memorializes Congress to appropriate at its next session for the purposes and objects aforesaid.

In order to effect the several objects for which this estimate of costs has been so made, this council now respectfully submits to you a form of bill as follows:

A BILL to improve the Severn River, State of Maryland, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the sum of one million five hundred thousand dollars, or so much thereof as may be required, be, and the same is hereby, appropriated for the purpose of obtaining, under the direction of the Secretary of War, a continuous ships' channel of not less than one hundred and fifty feet width at the bottom, with side slopes one on three and thirty feet deep at mean low water, from Chesapeake Bay by the way of the Severn River, to Round Bay, State of Maryland, with a tidal basin in said Round Bay, on the direct line of said channel, of not less than one thousand feet square and thirty feet deep, to be located at a place suitable therefor situate anywhere in said Round Bay; whereat shall be constructed, under the direction of the Secretary of the Navy, to be paid for out of this appropriation, a granite dry dock, with dimensions capable of docking with facility any United States naval vessel of the maximum number of tons displacement under all possible conditions of load now built or contemplated to be built, and whereof all facings shall be of dressed granite, and of a depth of water over the sill of not less than thirty feet at mean low tide.

SEC. 2. That the place on said Round Bay whereat said granite dry dock shall be so constructed and whereat said tidal basin shall be so established and excavated, together with ample grounds contiguous to either thereof and suitable therefor, shall be selected by the Secretary of the Navy, and title to any and all of said properties shall be acquired for and in the name of the United States by said Secretary by purchase or condemnation, or gift, or grant, and if acquired by purchase or by condemnation the same shall be paid for by the Secretary of the Treasury out of this appropriation whenever there shall be filed with him a certificate of the Secretary of the Navy reciting that said sites and grounds, describing all of same, have been selected by him, said certificate of the Secretary of the Navy to be accompanied with an opinion of the United States Attorney-General as to the validity of the title to all of said properties, and in the event that the Attorney-General shall declare said title to be valid he shall in his said opinion recite the names of all persons, respectively, to whom such payments should be so made for or on account of any of the properties so acquired for the uses and purposes herein stated.

Wherefore, for these and other valid reasons, which no doubt will readily occur to you in the careful study of all the factors which enter into those proposed improvements, this council respectfully represents that this communication may have your full attention, and that in any report which you may hereafter submit to Congress, or any of its committees, in these premises you may be pleased to also submit therewith this expression of the views of this council on the matters herein recited, together with all the exhibits submitted herewith.

We are, sirs, yours, very truly,

RICHARD H. GREEN, *Mayor.*
ROBERT MOSS, *Counselor.*
JOHN H. BRIGHT, Jr., *Alderman.*
ELMER E. PARKINSON, *Alderman.*
WEEMS RIDOUT, *Alderman.*
JOSEPH H. BELLIS, *Alderman.*
HERMAN ELLINGHOUSEN, *Alderman.*
WILEY H. BATES, *Alderman.*

EXHIBIT No. 2.

Extract from the Annual Report of the Secretary of the Navy for the year 1897. (Page 12 to 17.)

BUREAU OF YARDS AND DOCKS.

It appears from the report of the Bureau of Yards and Docks that to-day the most urgent need of the naval service is an increase of docking facilities. Of the eleven Government docks—nine on the Atlantic and two on the Pacific coast—three were designed to accommodate battle ships of the first class, one at New York, one at Port Royal, S. C., and one at Bremerton, Wash., on Puget Sound. But the dock at New York has been for six months and is likely for three months more to be undergoing repairs, and at the dock at Port Royal there is not only an insufficiency of water, but the cross-section of the dock is too small to safely admit battle ships with bilge keels affixed. A modern ship should be docked every few months, and owing to the above condition of the docks on this coast it was necessary to send the *Indiana* to Halifax in August last for this purpose.

On the Pacific coast there is but one dock of sufficient size to dock a modern battle ship. This is on Puget Sound, 900 miles from San Francisco. Access to it is through a narrow channel 20 miles wide, one side of which is in possession of a foreign country.

This lack of docking facilities should be remedied at the earliest possible moment. The necessity is imperative. The Department, therefore, appointed in August last a special board to examine the matter, and the valuable report made by it will be forwarded to Congress as soon as it meets.

This board reports that timber docks, although less expensive than stone or concrete, are not durable.

A plan for the location of additional Government docks, recommended by this board as a result of its investigations, is comprehensive and should be substantially carried out. When completed it will give the necessary facilities demanded by the extensive coast line of our country.

There are seven strategic divisions of our coast: First, from the Bay of Fundy to Cape Cod; second, from Cape Cod to Sandy Hook; third, from Sandy Hook to Cape Henry; fourth, from Cape Henry to Cape Sable; fifth, the coast line bordering on the Gulf of Mexico; sixth, the southern portion of the Pacific coast, and seventh, the northern portion. There should be docks and repair shops in each division, and these should be placed, as far as possible, at great commercial and industrial centers, not only because workmen and material can be obtained more readily and more reasonably at such points, but also because such points require and will have, from their importance to the country, a strong land defense; and, as the docks also require a strong defense, one set of fortifications will cover both civil and military property. In the great commercial centers also, from which ply large transocean steamers, the Government will be able to derive some revenue from accommodating them in its docks.

The board in its summary recommends as sites for "docks urgently necessary" Boston, New York, Norfolk, Port Royal, New Orleans, and Mare Island. The ground on which they proceed in this recommendation appears in the following quotation from their report:

"Acts of Congress have repeatedly required that navy-yards and dry docks, their most essential and costly structures, shall be located with due regard to the commercial as well as the naval interests, and commissions have been from time to time appointed to select such sites. The reports of these commissions have furnished the board valuable information in the discharge of its duties. In its instructions to these commissions the Navy Department has formulated the special requirements of a site for a navy-yard to be—

"1. A situation upon a good harbor of sufficient size, depth, and accessibility for vessels of the largest size and heaviest draft.

"2. A favorable position with respect to the principal lines of defense.

"3. A local security from water attack due to position and natural surroundings.

"4. Ample water frontage of sufficient depth and permanence, and with currents of moderate rapidity.

"5. A favorable position with respect to the lines of interior communication (by rail or otherwise) with the principal sources of supply.

"6. That the character of the ground shall be suitable for the construction of excavated docks and basins and for heavy structures.

"7. Proximity to centers of labor and supplies of material.

"8. Healthiness of the climate and its suitability for outdoor labor.

"9. The existence in the vicinity of an ample supply of good potable water."

Upon careful consideration of the report and the supplementary report of the board, and of the whole subject-matter, the Department recommends that action be taken by initial appropriations—at a total ultimate cost for the several improvements recommended less than that of one additional first-class battle ship, which is now of less importance than additional docks—to start at once the following works:

That a dock be constructed at Boston, as recommended by the board, adapted to the docking of the largest ocean-going vessels. As the New England coast is our first exposure to European attack, there should certainly be such a dock upon it; and this site is the one which meets all the requisites above quoted as essential or desirable, and which would be a source of considerable revenue to the Government from its commercial use. It is the center of the largest commercial and industrial activities in New England, is in the most favorable relation to coast defense, is close to a large body of mechanics of high skill and experience, and a new dock there has been repeatedly recommended in past years by the Bureau of Yards and Docks and other naval authorities. The only dock now there is a small and insufficient one of stone, laid over sixty years ago.

That while, on account of its lack of some of the enumerated requisites, the board does not include Portsmouth, N. H., in its list of recommendations, yet in view of the fact that its otherwise well-equipped yard has no dock at all, except a worn-out floating wooden dock built in 1851, so far worthless that its lifting capacity is reported to be only 1,500 tons, a dock should be built there commensurate with the use of the yard. If there is a navy-yard, there should be a dock;

That at New York, as soon as timber dock No. 3, which is now under repair, is ready for use, probably some time in March next, so that timber dock No. 2 can be spared, the latter, which is now deteriorating, be fitted with a concrete entrance and widened sufficiently to accommodate our largest battle ships;

That the present timber dock at League Island, completed only six years ago, which is of sufficient length (500 feet), but too narrow for naval vessels of the largest size, be widened and provided with a concrete entrance, so as to meet the requirements of a first-class dock. To further increase the utility of that yard some of its important work buildings, which are in a wretched condition, should be replaced with suitable structures. The reserve basin there is peculiarly well adapted for the purpose for which it is intended. When the work of excavation, which has been authorized and is in active progress, is completed it will afford an ample and unusually suitable fresh-water basin capable of holding the entire navy. The policy of putting ships not needed for immediate use out of commission will gradually increase the number in reserve, among which may be vessels of the largest size, and steps should be taken at once to have close at hand a dock sufficiently large to accommodate them in case of needed overhauling, painting, or ordinary repairs;

That at Norfolk the short dock be lengthened 150 feet, as recommended by the board, which will enable it to accommodate all except the very largest ships. In the near future, unless the suggestion below of the Newport News Ship Building and Dry Dock Company be adopted, the long dock there should also be widened and fitted with a concrete entrance, in which case it will be large enough for our largest ships;

That at Port Royal, as recommended by the board, a proper wharf be constructed adjoining the dock;

That at Algiers, New Orleans, a steel floating dock, with necessary wharf and moorings, be constructed; and

That at Mare Island the new first-class dock recommended by the board be provided as soon as the depth of water, which is now only 20 feet, shall be increased, as it ought to be, to the proper extent.

In this connection it should be said that at Newport News are all the requisites for a dock of the largest size. There is no lack of water as in the approaches to Norfolk. The Newport News Ship Building and Dry Dock Company have suggested their willingness to construct a dock of the very largest capacity, and to be governed by the Department as to its construction, size, materials, and character, beginning the work at once and completing it in a year, provided it can be assured of some agreement for its use by the Government.

Also, the International Dry Dock and Construction Company of New York—and it is claimed that the nature of the soil at the navy-yard there is not well adapted to the maintenance of a dock for vessels of great weight—propose to construct and also maintain a steel floating dry dock of the pattern recommended by the board, 550 feet long, of over 15,000 tons capacity, costing, they estimate, a million and a half dollars, and to complete the same ready for service in nine months, if insured by the Government 6 per cent interest on the amount invested for twenty years. For this remuneration they propose, in addition, to allow the use of the dock for one hundred days each year, and at their own expense to dock and discharge vessels of the Government within that time. Their proposal includes the free use and possession of the dock

by the United States for one hundred days each year in peace, and its entire use in war on terms to be mutually agreed upon, or, failing that, to be fixed by arbitration.

The propositions of these two companies are submitted for consideration, as they offer the Government an opportunity to enter upon the plan of constructing docks in cooperation with private establishments, if Congress shall deem such a course desirable.

It is possible that the same thing can be done at San Francisco, where the low water at Mare Island is a present embarrassment in the way of constructing at the navy-yard there a dock of sufficient size for our largest vessel.

FOREIGN DOCKING FACILITIES.

A comparison of the docking facilities of the principal maritime powers is instructive in this connection.

Great Britain has 611 docks, 28 of which accommodate first-class battle ships. Fourteen first-class battle ships can be docked at one time in the two yards of Chatham and Portsmouth alone.

France has 76 docks, 22 of which belonging to the Government and 7 to private companies can accommodate battle ships.

Germany has 70 docks, 2 of which belong to private companies and are capable of docking the largest battle ships.

Spain has 19 docks, only 1 of which is capable of docking the largest battle ships.

Italy has a total of 20 docks, 7 of which can accommodate battle ships.

Russia has 6 docks capable of accommodating battle ships.

Austria has 2 docks capable of accommodating battle ships.

China has 23 docks, 1 of which, at Port Arthur, is capable of accommodating battle ships.

Japan has 6 docks capable of accommodating battle ships, 2 of them belonging to private companies.

REPAIRS ON DRY DOCK NO. 3 AT THE NEW YORK NAVY-YARD.

Leaks appeared on the north side of this dock, near its entrance, in May last. They rapidly increased, flowing in in cascades for a length of 400 feet. Leaks soon appeared on the south side of the dock. A board of civil engineers was appointed to submit plans and estimates for repairs. It reported that an injury had occurred to the table-end sheet piling outside of the caisson and "that the rupture and breakage of the table-end sheet piling must have been caused by the dredging machine when the entrance way to the dock was dredged out in preparation for docking ships."

The Bureau of Yards and Docks recommended a cofferdam, to secure complete and substantial repairs, at an estimated cost of $100,000 for the total cost of cofferdam and repairing dock. The work was ordered to be done according to the plan submitted by the board. It was necessary to have the timber for this cofferdam, being of unusual dimensions, specially cut and manufactured in the South. Much unavoidable delay has been experienced in securing its delivery, but the cofferdam is practically completed, and work begun on the filling of the interior and of the embankments.

The constructor in charge states that the cost of the cofferdam has exceeded the original estimate, which also included the cost of its removal, but that in his opinion the balance remaining will, unless some unforeseen contingency occurs, be sufficient to effect the necessary repairs. He further states that after these repairs are completed the cost of removing the cofferdam and making good the quay walls and entrances to the dry dock will be $20,000, and therefore recommends:

"That there should be an additional appropriation of $25,000, made for the completion of repairs to dry dock No. 3, and in view of the risky character of this work and the unforeseen difficulties which may be encountered at any moment, due to the unusual tides, or leaks due to the treacherous nature of the soil or other accidents, that an additional contingent appropriation of at least equal amount should be made available for the purpose, as in such work as this it is practically impossible to estimate, even roughly, upon the cost of work which may be necessary."

NAVY-YARDS AND PLANTS.

A reference to the report of the Chief of the Bureau of Yards and Docks shows that the needs of the navy-yards for improvements to their plants are great, as are necessarily the estimates which he submits.

Secretary Tracy, in his report for 1891, made the following statement:

"In view of the heavy expenditures made necessary at the present time by the large tonnage, and especially by the large armored tonnage of vessels which it has fallen upon this Administration to construct, the Department has been unwilling to

recommend an immediate appropriation for the improvement of the navy-yard plants for the purposes mentioned in the accompanying reports of the different bureaus. These improvements will, however, be urgently needed when the new steel fleet now building has been for a time in commission, or if, in the meanwhile, the country should suddenly be called upon to put forth its naval strength."

Well-equipped repair shops are essential if we would keep the cost of repairs at a reasonable sum. The estimates for improvements submitted by the commandants of the navy-yards to the Chief of the Bureau of Yards and Docks amount to more than $8,000,000. While the appropriation of such an amount can not be expected, these recommendations are evidence that the actual needs are very large.

For the coming fiscal year the Bureau of Construction and Repair asks for improvements and repairs to the navy-yards at Portsmouth, Boston, New York, League Island, Norfolk, Mare Island, and Puget Sound to the extent of $50,000 each.

The Bureau of Steam Engineering as follows: Boston, $15,000; Norfolk, $35,000; Naval Station, Key West, $30,000; Naval Station, Puget Sound, $50,000.

The Bureau of Yards and Docks as follows: Boston, $15,400; New York, $348,637; League Island, $291,500; Washington, $76,347; Norfolk, $146,000; Mare Island, $232,571; Port Royal, 65,000; Puget Sound, $149,432. Also for housing torpedo vessels at such navy-yards and stations as may be selected, $225,000; for coaling wharf at Japonski Island, Alaska, $5,000; and for repairs and preservation of navy-yards, $400,000.

EXHIBIT No. 3.

[Senate Document No. 107, Fifty-fifth Congress, second session.]

EPORT OF THE BOARD APPOINTED TO CONSIDER THE SUBJECT OF DRY DOCKS.

NAVY-YARD, NEW YORK,
September, 1897.

IR: In obedience to the Department's order of the 17th ultimo, the ard appointed to consider the subject of dry docks required by the vernment submits the following report.

n making its investigations and preparing its conclusions, the board s followed carefully the directions of the Department to consider—

. The number of dry docks the Government should have to meet all possible uirements that may arise, having in view the naval establishment as now or-ized and as it will be when increased in size, and the possibility of docking vessels 15,000 to 20,000 tons displacement.

. The strategic conditions governing the selection of such points where it is desir-e to locate dry docks.

. The comparative cost of the different kind of docks best adapted for our needs, sent and prospective.

. Other matters in connection with dry docks that may, in the board's discretion, m advisable.

Acts of Congress have repeatedly required that navy-yards and dry cks, their most essential and costly structures, shall be located with e regard to the commercial as well as the naval interests, and com-ssions have been from time to time appointed to select such sites. e reports of these commissions have furnished the board valuable formation in the discharge of its duties. In its instructions to these mmissions the Navy Department has formulated the special require-ents of a site for a navy-yard to be—

1. A situation upon a good harbor, of sufficient size, depth, and accessibility for sels of the largest size and heaviest draft.
2. A favorable position with respect to the principal lines of defense.
3. A local security from water attack due to position and natural surroundings.
4. Ample water frontage of sufficient depth and permanence and with currents of derate rapidity.
5. A favorable position with respect to the lines of interior communication (by rail otherwise) with the principal sources of supply.
6. That the character of the ground shall be suitable for the construction of exca-ted docks and basins and for heavy structures.
7. Proximity to centers of labor and supplies of material.
8. Healthiness of the climate and its suitability for outdoor labor.
9. The existence in the vicinity of an ample supply of good potable water.

The use of steel for all structural purposes has recently become gen-al, and floating docks of that material have been designed, built, and e in use. As there were none of these in this country, a member of e board was sent by the Department, at its request, to Europe to tness their operation and obtain full information concerning their nstruction, conditions of use, and cost. His report is appended, arked A.

THE ATLANTIC COAST.

At the deepest indentations of our coast line are in general to l found our best harbors. Upon these are situated our great commerci cities, in which are concentrated supplies of labor and material and which are established the interior communications and military prote tion of the requirements of the naval station—on the New Englai coast, Boston; and proceeding south, New York, Philadelphia, Bal more, Newport News, Norfolk, and the group of harbors, Charlesto Port Royal, and Savannah.

At Portsmouth, N. H., there is a dock at the navy-yard. The do is a balance dock of wood, 350 feet long, 90 feet wide at top, and 60 fe wide at sill; its actual lifting capacity is 1,500 tons. This yard a dock are exposed to gun fire from sea and are situated on a river who tidal currents are very strong and whose channel is tortuous. Port mouth is not a commercial center. Its harbor is protected.

At Boston there is at the navy-yard a stone graving dock—wid of entrance at coping, 60 feet; depth over sill at mean high water, feet 10 inches; length, 350 feet—available for docking. Here are fou all the requisites of a site for a dry dock, and additional protecti against gun fire can be readily secured by mine fields covered by ba teries at Winthrop Point and to its northward.

At New York at the navy-yard are three docks, one a stone gravi dock, 330 feet available length; width, 66 feet; depth over sill, 25 fe 3 inches at mean high water. Two timber docks, one 451 feet 10 inch available length; 52 feet 10 inches width on sill; depth, 25 feet 6 inche the second, now under repair, 615 feet 10 inches available lengt width at sill, 71 feet 7⅛ inches; depth over sill at mean high water, feet. This site complies with all requirements.

At League Island at the navy-yard, there is a timber dock; 451 fe 10 inches available length; 52 feet 10½ inches width at sill; depth ov sill at mean high water, 25 feet 6 inches. This yard is 4 miles fro Philadelphia, which is 86 miles from the capes of Delaware Bay. T channel to it from the sea is obstructed by bars, and but 26 feet water can be carried at high water through dredged and tidal channel Philadelphia is a commercial center, and from its interior communic tions is an admirable site for building ships. Its approach is too dif cult for prompt repair of those injured, and is obstructed by ice winter. In war, both approach and egress can be readily closed by enemy with mines placed below any of its defenses.

At Baltimore there are no docks available for general naval us Twenty-seven feet of water can be carried to the city from the se through a dredged channel. Baltimore is 151 miles from the capes the Chesapeake, and is a commercial center well situated for the sa reasons as those stated for Philadelphia for the building of ships, b not for their prompt repair. The protection of its approaches in war dependent on holding Chesapeake Bay by a naval force. This failin it can be readily closed below its fortifications by mine fields.

Newport News, Va., has a commercial dock, that of the Newport Ne Shipbuilding and Dry Dock Company, capable of taking all classes naval vessels excepting the armored cruisers and battle ships. It is all respects an excellent site for a dry dock.

Norfolk, 12 miles from Newport News, has at the navy-yard two d docks, one of stone and one of timber. The stone dock is 295 feet inches available length; width at entrance at coping, 60 feet; bott inverted arch, depth over sill, 25 feet. The timber dock is 451 feet inches available length, with a width at entrance on sill of 52 feet 1

nches, and depth over sill at mean high water of 25 feet 6 inches. The pproach to these docks from the sea is like that to Newport News, clear f all dangers to navigation to and through Hampton Roads, which is rotected by fortifications and mine fields. Passing the middle-ground, he approach to Newport News has 25 feet of water at mean low water hrough a short and wide natural channel. The approach to Norfolk is hrough a narrow dredged channel 25 feet in depth at low water and ver 2 miles in length. Thence 26 feet can be carried to the navy-yard hrough a narrow channel.

At the naval station Port Royal is a timber dock having an availale length of 449 feet 6 inches, a width of entrance on sill of 66 feet, nd a depth over sill of 26 feet. It is 15 miles from the outer bar to the ock, and the channel has a depth of 21 feet at low water, with a rise f tide of 6.7 feet. There is 24 feet of water in the channel abreast the tation at low water. This channel is too narrow and shallow to allow vessel of heavy draft, as a battle ship, to anchor at the station, and here is no adequate provision for her security while entering or leavng the dock. Port Royal and Beaufort, the nearest towns, are not comercial centers; skilled labor and material are not readily obtainable. he harbor, Port Royal Sound, from its size and depth and its position, alfway between Norfolk, Va., and Cape Florida, is the most important ody of water on the Atlantic Coast south of Cape Henry. It has no lefense, nor has it been improved by artificial means. The location of he dock and this station by the commission of January, 1889, presumed both.

THE GULF OF MEXICO.

There are no dry docks or adequate docking facilities on the whole coast of this Gulf nor upon its tributary waters. The commission appointed November 22, 1890, to select a suitable site, having due regard to the commercial and naval interests, for a dry dock at some point on the shores of the Gulf of Mexico or the waters connected therewith, selected as the place New Orleans, La., and as the site of the dock the naval reservation at Algiers, a part of that city. After a careful review of the present conditions, which relatively have not changed, although the channels to the harbors of Galveston and Pensacola have been deepened, respectively, to 25 and 23 feet, the board adopts the conclusions of that commission for the reasons stated in its report, Ex. Doc. No. 79, House of Representatives, Fifty-second Congress, first session; copy of this document appended.

THE PACIFIC COAST.

At Puget Sound Naval Station there is a timber and masonry dock of an available length of 608 feet, a width at coping of 92 feet 7 inches, with 30 feet of water over the sill, and capable of taking our largest ships.

At Mare Island Navy-Yard there is a granite dock of available length 452 feet, 80 feet 7 inches wide on coping, with 27 feet 6 inches of water over sill at mean high water. The channel leading from San Francisco Bay to Mare Island Yard has an available depth of but 19 to 20 feet.

COMMERCIAL DOCKS.

17. Though there are many commercial dry docks on our coast, those on the Atlantic Coast, with the exception of the Erie Basin, New York, and the one at Newport News, Va., are too small or have too little

depth on the sill to render important service to the Navy. There is no dock of above 1,300 tons capacity on the Gulf Coast. On the Pacific Coast there is a dry dock at Hunters Point, San Francisco, Cal., available for the protected cruiser class, and a hydraulic lift at the Union Iron Works 440 feet long, 62 feet wide, capable of lifting 4,000 tons. Neither the dock nor the lift can take an armored cruiser or battle ship.

FOREIGN NAVAL DOCKS.

GREAT BRITAIN.

There are 13 dry docks and 2 locks at the Chatham-Sheerness Naval Station; 16 dry docks and 2 locks at the Portsmouth Naval Station, and 7 dry docks and 1 lock at the Devonport (Plymouth) Naval Station. There are 4 naval dry docks at Malta, and 3 new naval dry docks of very large capacity are now being built at Gibraltar. There are 14 dry docks located at the other naval stations.

FRANCE.

There are 9 dry docks at the Toulon Naval Station, 9 dry docks at the Brest Naval Station, and 8 dry docks at the Cherbourg Naval Station. There are 10 dry docks located at the other naval stations.

GERMANY.

There are 5 docks at the Kiel Naval Station and 5 docks at the Wilhelmshaven Naval Station, and 1 dock at the Dantzic Naval Station.

ITALY.

There are 6 dry docks at the Spezia Naval Station and 6 dry docks at other naval stations.

JAPAN.

There are 3 dry docks at the Yokosuka Naval Station and 6 dry docks at other naval stations.

SPAIN.

There are 3 dry docks at the Cadiz Naval Station and 3 dry docks at the other naval stations.

GENERAL STRATEGICAL CONSIDERATIONS.

The required consideration of the strategic value of such points a are suitable for the location of dry docks involves a brief general outline of our naval requirements in war. The sea is a plain common to both parties. If the disparity of their naval strength be great, the stronger holds command of the sea, and will at once take positions off or on the coasts of the weaker, having as his objective the destruction of his naval force, the trade dependent on sea communication between his ports, and, finally, the seizure and occupation of a base for further operations, naval and military. This base will be chosen at a safe anchorage and with the view of clear communication with his home ports; also, other things being equal, at positions where his fleet will threaten and disturb most the trade and industries of the weaker power. We are from a naval point of view weak in comparison with the great naval powers of Europe; and the naval strength of Japan is growing so rapidly that within a year or two she also will overmatch us in available naval strength in the Pacific. Every effort is then

necessary on our part to at least retain command of the sea on our own coasts, and to supplement our naval strength by providing accessible places for repair and docking, and by fortifications so located that when our squadrons are pressed by a superior force they may use them as supports in holding the approaches to our coasts. So long as an enemy is compelled to draw all his supplies from his home stations his operations must be limited by the necessity of holding his communications clear and the quantity of supplies he can transport in his ships under the protection of his fleets. If he must be prepared to meet upon arrival on our coasts even a much weaker naval force, held compactly in hand, with repair and supply facilities near, we can retain the command of the sea on our coasts and render impossible its occupation near our commercial centers.

On the Atlantic Coast the positions most likely to be sought by an enemy are Massachusetts Bay, Long Island Sound, New York and Chesapeake bays. The positions strategically important for the naval defense and which should be strongly held are the harbors at and on their approaches, which are Portland, Me., and Provincetown, Mass., the eastern entrance to Long Island Sound and Sandy Hook at entrance to New York Bay, and the Cape Henry Channel at the entrance to Chesapeake Bay. The entrances to Delaware Bay and to Port Royal Sound, South Carolina, should also be secure from occupancy.

On the Gulf Coast the attack will be through the Florida or Yucatan channels, and the natural defense will be on the line from Tortugas to Key West.

On the Pacific Coast the positions of greatest importance are Puget Sound, San Francisco Bay, and, contingent on its projected improvements, San Pedro Bay. The conditions at the entrance of Columbia River are similar to those at Delaware Bay as respects its naval importance. Owing to the great distances from this coast to the ports of any sea power except those of Great Britain to the northward, the attack will be an attempt at seizure of one of these positions.

To meet the enemy in these positions and hold the lines of defense will be the most important work of the Navy.

RECOMMENDATIONS.

The board recommends that additional docks be constructed and located as follows:

BOSTON NAVY-YARD.

One concrete graving dock, length available for docking 750 feet, 90 feet wide at sill, with a depth of 30 feet of water over sill and keel blocks at half tide.

The approximate form of cross section of this dock should be that shown in the sketch marked B.

The sides of the entrance should be vertical, with a sliding caisson withdrawing into a special pocket on one side, as is the most recent practice.

A channel of equal depth with the dock should be dredged out to permit a vessel to enter.

NEW YORK NAVY-YARD.

A concrete graving dock 500 feet long on the blocks, 90 feet wide on the sill, with a depth of 30 feet over the sill and blocks at mean high water. This dock should be located between the present stone

dock and dock No. 2, the sawmill building being removed to make room. The cross section of this dock to be the same as that of the dock recommended for the Boston Navy-Yard, and the type of caisson also the same.

NORFOLK NAVY-YARD.

The stone dock to be lengthened in concrete to 450 feet, thus enabling it to take all vessels of the cruiser class except the *New York* and *Brooklyn*.

A concrete graving dock 500 feet long on the blocks, 90 feet wide on sill, with a depth over sill and blocks of 30 feet at mean high water should be located near the present timber dock obliquely to the water front. The dock to be similar in all respects to that recommended for the New York Navy-Yard. The construction of this dock is only recommended on the contingency mentioned under the paragraph relating to Newport News.

NEWPORT NEWS.

The deep and protected waters at the mouth of the James River estuary are regarded by the board as one of the most important positions on the entire coast. In this neighborhood it is essential that there should be a dock capable of taking ships of the largest size, and facilities for making repairs of every character. Were the water approaches of a nature to warrant, the Norfolk Navy-Yard would be the proper location for such a dock, but the channel from the open water of Hampton Roads to the navy-yard is 10 miles long through narrow and dredged channels, has a depth of but 25 feet at low water, and is so narrow that the accidental sinking of any large vessel in it would effectually block the fairway. The board is therefore of the opinion that Norfolk in its present condition is not a proper place for the largest type of dock required by the strategical importance of the location. At Newport News are sufficient water and good conditions generally for a first-class floating dock, and at this place a steel double-sided combined floating and graving dock is recommended, unless the channel from Hampton Roads to Norfolk be increased, concurrently with the building of the dock at Norfolk, to a width of 400 feet and a depth of 30 feet at mean low water, in which event the recommendation of the board is that the concrete graving dock referred to under Norfolk Navy-Yard be constructed.

PORT ROYAL.

To attain the maximum efficiency of the dock already at this station a wharf should be built along the navy-yard front adjoining the dock, at which a vessel could lie before docking and be lightened if necessary. This wharf should be on concrete or iron piling foundation (on account of the teredo). The channel leading to the dock and along the water front of the proposed wharf should be dredged to a depth of 30 feet at mean half tide.

AT NEW ORLEANS (ALGIERS).

The board recommends that there be built and located here one double-sided steel floating dock of the type known as the combined floating and graving self-docking dock. This dock should be capable

of lifting a vessel of 15,000 tons displacement and 27 feet draft of water. It is recommended that a wharf be built along the water front of the Government reservation at Algiers to be an adjunct to the dock. The latter will be moored and will operate in deep water offshore, and when a vessel is lifted, dock and ship can be hauled together alongside the wharf and the ship be easily accessible to workmen from the naval station. A steel floating dock is selected for this situation for the following reasons:

1. Changes in water level from high and low river do not affect its operation.
2. It is located in fresh water, and expense of maintenance will be small.
3. Great depth of water within mooring distance of wharf.
4. Rapidity with which a floating dock can be constructed to meet the urgent need for a dock on the Gulf of Mexico.

MARE ISLAND.

The board has most carefully considered the advisability of increasing the docking facilities of this naval station. Its situation fills many of the requisites for a navy-yard, but it is lacking in depth of water in its approaches. A draft of 22 feet can now be carried through San Pablo Bay and 19 to 20 feet up the Napa River to the navy-yard. The board, while recognizing the urgency, does not therefore recommend any additional docking facilities at the navy-yard unless, concurrently with the building of the dock, the channel be increased as recommended in the letter of the Navy Department to the War Department of December 16, 1896, viz: To 1,000 feet wide (except at Commission Rock, where it is to be 600 feet), and with 30 feet depth at low water, and this channel be continued through San Pablo Bay; in which case the board recommends a dock similar to those recommended at New York and Norfolk.

The foregoing, in the opinion of the board, are urgently needed. If, however, the docking facilities of the country are to be on a thoroughly adequate footing, docks should be placed at the following points:

NEW LONDON, CONN.

The naval station at New London is situated within 10 miles of the eastern entrance to Long Island Sound, at which fortifications are now projected and building to assist the naval defense of this most important position. To the north of this station, and nearly adjoining it, is a natural basin well protected. Reports of the commandant of the station, dated March 14 and August 9, 1890, are on file at the Office of Naval Intelligence, and at the Bureau of Yards and Docks are on file the report of a board of civil engineers, dated October 22, 1877, and the annual report of the commandant for 1890, giving detailed information concerning this basin and its availability for use as a fresh-water basin and as a site for a dry dock. The basin can be made 18.8 acres in extent and a dock be formed by locks in the canal joining the basin with the channel of the river. The natural advantages of the position are most remarkable. The character of the site lends itself admirably to the establishment of a great depot for munitions of war of every kind, in addition to the great desideratum of the fresh-water basin right at hand. The cost of dredging out this basin and constructing the necessary locks to form a dock is very moderate, in the opinion of the board less than $1,000,000 (including the purchase of the land).

The board, therefore, in view of the great strategic importance of the situation and its natural advantages, recommends that should the Department decide to establish a fresh-water basin at this site the entrance to it be a canal provided with locks which may form a dry dock of sufficient capacity to take the largest vessels.

TORTUGAS.

The board recommends that a double-sided steel floating and graving dock be located at Tortugas, in the inner harbor, using the natural basin of the entrance of the inner harbor for docking and undocking in case dredging a basin is found to be impracticable during the improvements of channel, as recommended. Tortugas harbor is selected for the strategical reasons stated in the report of the Gulf Dock Commission, 1891, from its advantatgeous position in relation to the commerce of all the ports of the Gulf of Mexico, being about equally distant from the principal centers of trade on the Gulf, and from its remarkable advantages as a coaling and supply station for heavy ships, as stated in the report of the board directed March 6, 1896, by the Navy Department, to examine and report upon the feasibility of a coaling station there (which report is on file at the Office of Naval Intelligence). Tortugas, from its position, bears the same relation to the Gulf of Mexico as Gibraltar to the Mediterranean. At Gibraltar, England is building three large docks now, one of which is 850 feet long, 95 wide at coping at entrance, with 35 feet 6 inches of water on the sill, the largest dock in the world.

Pensacola, Fla., and Galveston, Tex., on the further deepening of their approaches, offer additional sites for floating dry docks, should in the future naval interests in the Gulf of Mexico require an increase of docking facilities.

SAN FRANCISCO BAY.

The island of Yerba Buena seems to the board to offer greater advantages for the location of a dry dock than any other position on the Pacific coast. If a careful survey of the character of the geological formation of this island gives satisfactory results, the board recommends the construction of a double-ended dock of concrete across the northeastern end of the island, the axis of the dock to lie in a northwesterly and southeasterly direction. This dock to be similar in size and cross section to that proposed for Boston.

SAN PEDRO, CAL.

In view of the great improvements contemplated in the harbor of San Pedro, the building of a breakwater, jetties, etc., the board recommends the construction of a concrete dock in connection with the improvements proposed. This dock to be of the same type and dimensions as that recommended for Boston, Mass.

ALASKA.

Commercial development on the coast of Alaska, now greatly quickened by recent gold discoveries, has not sufficiently advanced as yet to warrant the board's suggesting upon it any site for a dry dock.

SUMMARY.

The following summary sets forth the estimated time and cost of the ock installation and improvements recommended by the board:

Docks urgently necessary

	Time.	Cost.
ston: Concrete dock 750 feet long	Two years	$1,350,000
w York: Concrete dock 500 feet long	do	1,200,000
rfolk:		
Concrete dock 500 feet long (alternate to Newport News)	do	1,100,000
Lengthening present stone dock with concrete 150 feet	One year	160,000
rt Royal: Construction of wharf and slightly widening lower altars of dock	Six months	75,000
w Orleans (Algiers): Steel floating dock moorings and wharf	Ten months	750,000
are Island: Concrete dock 500 feet long	Two years	1,100,000
Total		5,735,000

Docks recommended as additional to place the docking facilities of the country on an adequate footing.

	Time.	Cost.
w London: A fresh-water basin and dock connecting basin with river	Two years	$1,000,000
wport News: Steel floating dock and moorings (alternate to Norfolk concrete dock)	Ten months	650,000
ortugas: Steel floating dock and moorings	do	650,000
an Francisco: Concrete dock on Yerba Buena Island 750 feet long	Two years	1,550,000
an Pedro: Concrete dock 750 feet long	do	1,550,000
Total		5,400,000

RECAPITULATION OF DOCKS AND STRUCTURES RECOMMENDED.

Six concrete docks: Boston, New York, Norfolk (the last contingent on channel improvements), San Francisco (contingent on survey Yerba Buena Island), Mare Island (contingent on channel improvements), and San Pedro (contingent on harbor improvements).

Three steel floating docks: Newport News (alternate to Norfolk dock), New Orleans, Tortugas.

One stone dock to be lengthened: Norfolk.

Two wharves to be constructed as adjuncts to docks: Port Royal, New Orleans.

Dredging of channels and approaches to obtain water depth equal to depth over sill: Boston, Norfolk, Port Royal, Mare Island, and Yerba Buena.

The United States has a total of eleven naval dry docks, only one of which at this time—that at Puget Sound, Washington—can take our battle ships. With the addition of all docks proposed by the board we would have for naval purposes on our entire coast line but one more dock than has Great Britain in one of its navy-yards—Portsmouth, England.

PROPOSED PRIVATE DOCK TO BE BUILT AT NEWPORT NEWS.

The board, learning that the Newport News Shipbuilding and Dry Dock Company contemplated building a second dry dock at their works, opened a correspondence with the company, by authority of the Department. The letters are appended, marked M. The president of the company also appeared before the board and stated that in the

construction of its dock the company would gladly be governed by t wishes of the Department as to its materials, size, or character, a would enter into any fair agreement with the Department as to its u by the Government. The company is also willing to immediately co mence the building of a dock and prosecute the work to completi with all possible speed, one year being specified by the president the probable extreme limit of time required.

GENERAL CONSIDERATIONS IN CONNECTION WITH DRY DOCKS.

After a careful investigation the board submits the following co clusions bearing on the subject of dry docks: The materials in gene use for dock construction are hewn stone, concrete, timber, and ste or combinations thereof. The stone dock is, when well built, all that desirable for such a structure, but the cost and long time required f the completion of such a dock are against its adoption except in ca where the vicinity of a suitable quarry and the presence of stonec ters in sufficient numbers would reduce the cost to that of a concre structure of the same capacity.

The concrete dock is practically a monolithic structure, and wh the material is well set and hardened by time possesses nearly all t good qualities of granite. Its advantages consist in the rapidi facility, and cheapness of construction and the seamless, monolitl character of the completed work.

Foreign practice has been the building of stone docks, but in rec years the stone has been combined with concrete, and more recen the use of stone or brick has been confined to the coping and alta The present practice is the use of concrete alone. The great dock j completed at Cardiff is of this type.

The timber dock is a well-known American type. Its advantages in the ease and cheapness of construction; its disadvantages, in t employment of a perishable material—wood—subject to decay inher in an organic material, which no process can entirely prevent, and p ticularly to decay which can not be observed and guarded again Large portions of the material of the dock are so placed that there no possibility of inspection. The dock is also subject to acciden injury arising from the character of the material used in its constr tion, a marked instance being that of dock No. 3 at New York, wh a dredger's bucket wrecked a portion of the sheet piling at the tal end, opening a hole through which large quantities of water enter the dock, rendering it useless and threatening its destruction. T reports on the condition of the several wooden docks in the navy-yar of the Atlantic Coast are appended, showing the liability to deterio tion of this character of structure. This liability is, of course, variab depending upon circumstances of climate and soil and the presence the teredo or other marine insect.

The steel dock is of the floating or lifting variety. This is also well-known American type, formerly of small dimensions and made timber. Docks of this character have been in use in this and ott countries for many years. The floating dock passed through the sa development of material, wood, iron, steel, as did its kindred str tures—ships—and has kept pace in size and capacity with their devel ment, a 17,500-ton floating steel dock being now in operation in Hambu This development has been most rapid in England within the last t years, and numbers of them are in successful operation, one firm alo in that country having 35,000 tons of these docks now under contra

heir advantages lie in the cheapness and rapidity with which they can e constructed; their disadvantages in the great depth of water required r their operation (47 feet for 20,000 tons). These docks are made self-ocking, so that every part is accessible, can be inspected, and covered ith anticorrosive paint. Their endurance is made practically perma-ent. The efficiency and safety of the type are established to the atisfaction of the board.

In regard to the relative cost of docks constructed of these materials, is difficult to reach any accurate results from a consideration of the ost of docks already built, on account of the many different conditions nd circumstances attending their construction in various localities. ot only does the nature of the ground affect such cost, but the facility ith which labor and material may be obtained, the cost of such labor nd material, and the climate, all influence the resulting final cost.

From such information as the board possesses, it would seem that he cost of a steel floating dock and timber graving dock of equal capac-ies would be nearly equal, the time of construction being in favor of he steel dock in the ratio of about 7 to 12. The concrete dock under he same conditions as the timber dock would cost from 50 to 75 per ent more, and the time of construction would be 50 per cent greater.

In considering the relative cost of stone and concrete docks, it is lifficult to form any accurate comparion. Much depends on the facil-ity for obtaining and transporting the stone, and in securing an ade-quate supply of stonecutters—a class of highly paid mechanics. It can be safely stated that the cost of the granite dock will be about double that of the concrete.

The board recommends the following as important details to be embodied in the design of all docks:

Keel blocks 4 feet in height.

Top of keel blocks on level with the sill.

Vertical entrance to shore docks so that the actual clearance of the vessel in passing through will be seen at the water line, at which point, if at all, contact may occur and yet any appendages below water (bilge keels) be clear.

A sufficient number of bollards, fasts, etc., along the coping for securing and handling a vessel with power capstans at the head and quarters of the dock and a 10-ton traveling crane.

A sliding caisson withdrawing into a lateral pocket in which it can be itself docked if desired.

Efficient removable railings around the dock coping.

The drainage of the dock should be on the surface of the floor to the pump wells.

The pumps should be placed as low as practicable, so as to depend as little as possible on suction in working. Electrically-driven centrifugal pumps are recommended where a central power plant is established.

Every dock or group of docks should have a regular crew to keep them in order and operate them. In the case of the modern floating dock but four men are required in addition to the crew of the vessel being docked, but under ordinary conditions of docking, where no ship's crew is available, and for simple painting or repairs, there would be required for this class of dock a crew of 30 men. Comfortable quarters for these can be readily provided in the dock itself, in case it be isolated.

All new docks recommended are capable of taking the largest battle-ship contemplated, either in this country or abroad, and three of them are capable of taking ships, naval or mercantile, larger than any yet designed. A uniform standard entrance and cross section of body are recommended for all new shore graving docks, as shown in sketch marked C, appended. The depth of 30 feet over the sill is also recommended as standard, being in all probability the maximum draft of any vessel, even in the out-of-trim condition produced by collision, accident, explosion, or gun fire.

The board is of the opinion that separate systems of docking should be provided, for torpedo and other small vessels, of a size in proportion

to these classes. A simple system of depositing dock and railway is recommended. (See report of member of board, appended, marked A.)

In determining the kind of dock recommended for any given location the board has been governed by the natural characteristics of the situation. Where, in its opinion, a shore graving dock is the most desirable type, concrete has been given the preference as the material, the concrete monolithic dock being the board's preferred type where existing conditions permit its use. In other places, as at Newport News, New Orleans, Tortugas, natural or other features of the locality limited the selection or offered peculiar advantages to the steel floating and graving dock. For docks of this class the board recommends the design of Messrs. Clark and Stanfield, fully described and recommended in Appendix A.

The board is of the conviction that all Government docks should be of a permanent character and that their readiness for use at all times be assured at any cost.

Very respectfully,

F. M. BUNCE,
Commodore, U. S. N., Senior Member.
F. E. CHADWICK,
Commander, U. S. N., Member.
ROBERT B. DASHIELL,
Assistant Naval Constructor, U. S. N., Member.
CHARLES W. PARKS,
Civil Engineer, U. S. N., Recorder.

The SECRETARY OF THE NAVY,
Washington, D. C.

APPENDIXES.

APPENDIX A.

EUROPEAN DOCKS AND THEIR CONSTRUCTION.

NAVY DEPARTMENT,
Washington, D. C., September 15, 1897.

:: In obedience to the Department's order No. 77318 of the 18th ultimo, copy of h is appended, I proceeded to England on August 21, 1897, by steamer *Campania*, ing in Liverpool on the evening of the 27th.

on arrival I received a telegram from the naval attaché at London that the ına floating dock, just completed by Messrs. Swan & Hunter, of Wallsend on 'yne, would be launched the next day. I therefore proceeded as soon as possi- o Newcastle, and thence to Wallsend, arriving in time to witness the launching ıe dock. Through the courtesy of Messrs. Swan & Hunter, the builders of the , and of Messrs. Clark & Stanfield, the designers, I was enabled to make a ɔugh examination of this structure, which represents the latest and most fully loped type of the self-docking floating graving dock. Subsequently I made ıinations, as thoroughly as time and circumstances would permit, of other docks, shore and floating, along the Tyne. It can be safely said that on this river is ɜented every type of dock in use for handling modern ships. Such being the any extended trip to the Continent to see the Hamburg, Bremerhaven, French, an, or Spanish docks was entirely unnecessary, considering the limited time at lisposal.

ıving obtained on the Tyne such data as I required, I proceeded to London, where s in consultation with the firm of Messrs. Clark & Standfield, engineers and ners of the accepted standard types of floating docks in Europe. I spent several with this firm in determining the structural features of floating docks, such as ld probably be required by this country, in considering the minimum practica- lepth of floating dock suitable for the needs of the Navy Department in the shal- water of our ports, and examining generally into the feasibility of the entire ɜm as applied to American ships, harbors, and methods of docking.

ɪisited Cardiff, Wales, and examined the new concrete dock and off-shore float- lock of the Cardiff Dock and Pontoon Company. There I saw a floating dock peration, and gathered from the officers and engineers of the company much able information and their opinions in regard to the working of the system.

ıe last two days of my visit I spent in examining the great London docks, the wall docks, the West India and East India docks, and the Empress and other ɪs at Southampton.

am indebted to the firm of Messrs. Clark & Standfield for many courtesies, not in explaining their own systems, but through letters of introduction enabling o visit other docks both on the Tyne and at Cardiff, and assisting me in meeting t engineers whose views on the matter in hand have been extremely valuable to ıs a committee of the board.

eturned to Washington, D. C., on September 11, 1897.

NOTES ON DOCKS.

ıe most important docks examined were the Havana floating dock and the Car- ɔoncrete dock. These represent the two principal types in general use, namely, loating or pontoon system, of steel construction, and the permanent shore grav- ock of masonry. An important modification of the regular double-sided floating exists in the off-shore floating dock, such as the great North Shields, the Ham-

burg, the Cardiff (off-shore), and other docks. The difference between the two types of floating docks lies in the method of balancing the horizontal pontoons and keeping them level while in operation. In the double-sided dock this is accomplished by the buoyancy of the two parallel walls or sides, one on each side the pontoon bottom; while in the off-shore type there is but one such side, and the lifting pontoons are kept level at all times by a system of parallel-motion rod connections to permanent emplacements on the shore. But as the principle and operation of the two types are similar, only the features of the double-sided dock need be touched upon. This dock is designated the "floating dock;" the other, the "off-shore dock." The one is entirely independent of the shore, the other connected with it.

GENERAL DESCRIPTION OF THE HABANA DOCK.

This dock consists of three principal parts: First, the pontoons of the dock which give the required buoyancy both to the dock when empty or light, and to the dock with load of vessel in place on the blocks. The entire lifting power of the dock, when raising a vessel, lies in these pontoons. Second, the high sides or walls which, by their buoyancy, regulate the descent of the pontoons below the water when the dock is sunk to receive a vessel; they also afford the necessary stability and serve to keep the pontoons level when the dock is being raised. Third, the movable caissons or gates that are used when it is required to increase the lifting capacity of the dock. The use of these gates converts the simple lifting dock into a regular floating graving dock.

The total length of the dock is 450 feet, the ends of course being open. The width between broad altars at the bottom of the dock is 82 feet. The depth from surface of water to top of keel blocks when the dock is fully immersed is 27 feet 6 inches. The total draft of water required under these conditions is 42 feet 6 inches, and the freeboard of the side walls at this draft is 4 feet 2 inches.

The pontoons are five in number. The three middle ones are alike and are rectangular in form. The two end ones are also alike and are straight on the sides adjacent to the inner pontoons, but are finished off in the form of a point so as to resemble roughly the head and stern of a vessel. They are provided with hawse pipes for moorings, and the necessary capstans and bitts.

The pontoons are 87 feet 11½ inches wide over all. The three middle pontoons have a length of 75 feet, that of the end pontoons being 108 feet 4 inches. There is a space of about 2 feet between each pontoon, and about the same distance between the pontoons and the side walls.

All pontoons are practically steel water-tight boxes, 11 feet 8½ inches deep, plated on all six sides and stiffened transversely by a series of girders which form bulkheads across them about 8 feet apart. These bulkheads are strongly connected to top and bottom plating by double angle irons. In the longitudinal direction, the pontoons are stiffened by angle irons spaced about 2 feet, forming square frames connected at their corners and stiffened by gusset plates and diagonal bracing, thus forming a complete series of lattice girders running from one end of the pontoon to the other.

There are three water-tight bulkheads in each pontoon, one under the line of the keel, and the others under each row of bilge blocks. These bulkheads thus divide the pontoons into four separate water-tight compartments. The central bulkhead is strongly strengthened by double arms and large gussets, and in the middle of each bay there is a strong plate which is called a "breathing plate," and which is also connected by frames and by a curtain plate to the transverse girders. This arrangement makes the center of the pontoon a very strong structure and capable of supporting the ship anywhere within the neighborhood of the keel blocks. There can be no possible give to any part of the dock plating in this region where the greatest weight of ship is borne. A similar system of strengthening under the two rows of bilge blocks gives the necessary resistance on this line.

The sides of the pontoons next the side walls have a depth of 20 feet. A deck 2 feet wide, forming a broad altar, runs along the top of these raised sides. From this deck the slope down to the bottom of the keel is about 65 degrees with the vertical. Along the side walls channel irons are worked in such a way as to form convenient altars at proper heights to receive the side shores.

The stiffening plates of the pontoons which run athwart the dock are extended through the skin plating and form a great number of flanges at the ends of these pontoons for attachment to similar flanges on the side walls. The side walls were stiffened in much the same way as the pontoons, and the stiffening plates also extended, at the proper places, through the skin plating to meet similar extensions (just named) on the pontoons. By connecting these two flanges of plating by bolts, the side walls are very rigidly connected with the pontoons. The space of 2 feet between each pon-

toon is covered over by an extension of the dock plating and a rubber water-tight gasket. The pointed ends of the extreme pontoons have light bulkheads as high as the top of keel blocks, thus forming a breakwater which will keep any sea from washing into the dock when the dock is afloat.

The high sides of walls have a total length of 383 feet 4 inches, a breadth of 9 feet 2 inches, and a height of 44 feet 2 inches. Their structure is much the same as that of the pontoons. At a height of 32 feet 6 inches there is worked a complete water-tight deck, above which water is never admitted. The space above the deck is allotted to engines, boilers, dynamos, motors, crew, and storerooms. In the sides of the walls are two large gangway openings 50 feet by 15 feet, for light, air, and access. The valve control houses are amidships on the top of the side walls. The inner faces of the sides are fitted with all necessary ladders and convenient swing-out outriggers for painting or cleaning stages.

There is a complete duplicate set of boilers, engines, dynamos, and motors. All the mechanical operations of pumping, hauling, etc., are done by electric motors. All motors are cross connected to those on the other side, so that in case of accident to one dynamo the other can run all the machinery. The pump motors are on vertical shafts supported on ball bearings. The pumps are centrifugal at the lower ends of these shafts and run in the water to be pumped out, thus doing away with all trouble from inefficient suction. All compartments are connected with the pumps or sea in such a way that every one of them is under complete control from the valve control house, either for emptying or filling.

The keel blocks are 4 feet high, spaced 1 foot apart. There are worked regular box-girder structures on each side the keel blocks on which the bilge blocks slide. These blocks are spaced 8 feet between centers. The blocks are hauled by chains in the usual manner.

Near the top of the side walls and traveling through them are two pairs of centering shores. These are worked in and out by powerful gearing, the shafting of which is cross connected under the ship so that a pair of shores move in and out together and thus force a vessel over the keel blocks without the annoyance of measurements being taken to center the ship.

There is provided a pair of swinging gangways at the stern of the dock, which unite at the ends and form a bridge. They also are arranged to be used as cranes for lifting a propeller or rudder, their capacity being 15 tons.

The dock, with its ends open and utilizing only the displacement of its pontoons, can raise a vessel of any length with a dead weight of 10,000 tons. This is the condition under which a long cruiser would be lifted where the weight per foot run on the keel blocks was about 20 tons. Heavy battle ships, being much shorter and heavier, require a greater concentration of lifting power than is attainable in any long dock such as this. To meet this emergency there are provided gates or caissons, which are floated across the open ends of the dock close to the ends of the ship, and the pound thus formed being pumped out gives enormously increased lifting power on a short length of dock. Under this latter condition, the Havana dock can raise an ironclad of 12,000 tons displacement, having a weight of 38 tons per foot.

In the first condition the vessel and entire floor of the dock is raised entirely above the surrounding water. In the second condition the top of the pontoons is about 4 feet above water, the water in the pound being pumped out leaving a regular graving dock 8 feet deep.

The stability of the dock is all that could be desired. The minimum metacentric height (when lifting its full load) is at the period when the ship's bilges are just emerging and the broad altars coming awash, and is 3 feet 10¾ inches, being about that of the average battle ship. As soon as the altar emerges, this metacentric height rises at once to 16 feet 9 inches, and when the full lift has been accomplished, it finally reaches 50 feet 2 inches. To heel the dock and load 5 degrees would require an external effort of about 63,500 foot-tons, while to heel a 12,000-ton battle ship through the same angle would require about 3,100 foot-tons, or one-twentieth as much.

Every convenience for easy handling and examination of ships has been fitted up on this dock. The usual bitts are fitted for riding to chain cables and four anchors.

This dock impresses one with its simplicity and completeness, and shows the results of many years practical experience on the part of very ingenious designers and builders.

The contract price for the dock is £109,000, £30,000 of which is for towing to Havana and for expeditions work. The contract was signed and work begun in February last, and at this date I learn that the dock has started for Havana.

I could not see this dock in operation. But as the offshore dock operates in precisely the same way as the floating dock, I formed an entirely satisfactory idea of this feature by witnessing the action of the large offshore dock at Cardiff.

All of Messrs. Clark & Standfield's docks are what is known as self-docking. The entire system of pontoons can be raised clear of the water one at a time and their sides and bottoms can be cleaned and painted. The bottoms of the side walls can be reached by tilting the dock down on one side, thus raising the other side out of the water.

Floating docks (both types) are in daily use at the following ports: Carthagena, Sourabaya, St. Thomas, Nicolaieff, Amsterdam, Barrow, Vladivostok, Rotterdam Hamburg, Cardiff, North Shields No. 1, Flensburg, Zarate, Mexican, North Shields No. 2, Stockholm, and Barcelona. Of these, the docks at Nicolaieff, Barrow, Vladivostok, Hamburg, Cardiff, North Shields No. 1, Flensburg, Zarate, Mexican, North Shields No. 2, Stockholm, and Barcelona are on designs of Messrs. Clark & Standfield. This firm have at present 35,000 tons of floating docks under contract. The North Shields dock, I was told, has been idle but three times since it was first put in commission three years ago.

Engineers who had operated these docks informed me that a tidal current of 5 knots an hour, such as is frequently seen in the Tyne, had no detrimental effect on the operation of the dock, and, indeed, was frequently used to assist in sheering the ship over the blocks. The floating dock could also, so I was told, be worked when the waves in the Tyne, due to easterly gales outside, were 4 feet in height from crest to hollow—a condition which entirely suspended operations with any shore dock. Mercantile docks have pumping plants capable of raising a vessel in from twenty minutes to one hour. The Havana dock had a plant capable of lifting a vessel of 12,000 tons in about two and one-half hours.

MASONRY DOCKS.

The concrete dock at Cardiff will be completed this month. It is an example of the latest type of masonry dock with all the most recent improvements in details. This dock is 650 feet long, 107 feet wide at top, 90 feet wide at bottom of entrance, and 48 feet deep from coping to bottom. The floor of the dock is 4 feet below the top of the sill, so that the efficient depth of the dock is that of the top of the keel blocks. The structure is exceedingly simple. The dock is merely an enormous tub of concrete with an opening at the end for the caisson or gate. The trenches for the side walls were excavated first, being 25 feet across, with the earth shored up by plank. The walls at bottom are 17½ feet thick, tapering to 4 feet in thickness at the top or coping. While the concrete for the walls was being run up the middle portion was excavated, an ordinary cofferdam closing the entrance. This dam consisted of two crescent-shaped rows of 8-inch sheet piling, the rows being from 8 to 10 feet apart, bound together by long bolts, and the interval filled up with clay mud.

The bottom of the dock is 10 feet thick, resting on the natural gravel. The drainage was on the surface and ran to the pumps, which had a well to operate in close to the dock. The pumps were centrifugal, working close to the bottom of the dock, and were capable of emptying the dock, with no vessel in it, in two and one-half hours.

There were two caissons, one to ship across the middle of the dock, thus making a double dock; the other the regular gate of the dock entrance. The caisson was ingeniously arranged to slide on its keel laterally into a pocket on one side the entrance. The ends of the caisson, as well as the sides of the dock entrance, were nearly vertical, so that the clearance between the ship and the dock was that actually visible at the corner of the dock as the ship passed in. The pocket into which the caisson was hauled could be utilized to dock the caisson itself for repairs. The caisson, being nearly afloat and bearing but little on its keel, could be readily dragged over the smooth concrete floor by a small steam winch.

The dock itself was a solid mass of concrete without seam or joint and absolutely dry. The main portions were made of concrete in the proportions of 1 to 7—cement to sand and stone—the facings and coping being 1 to 4. The time occupied in its construction has been twenty-four months and the cost £100,000, which includes the pumping plant, but not the caisson. The cost of the latter could not be determined. While not available for use, the best results were anticipated for this dock by the engineers in charge. The circumstances attending the delivery of material and the character of the ground were specially favorable in this case, which accounts for the low cost, while the labor available could not always equal the requirements, and so prolonged somewhat the time of the work. There was no piling of any kind. The integrity and perfect dryness of the structure, together with the good practical arrangements of all its accessories, commended themselves to me very strongly.

In the case of the Thompson concrete dock at North Shields, piling under the bottom was resorted to on account of the character of the ground.

The walls of all the masonry docks are so steep that ladders and stairs are, of course, provided for access. The steep wall brings the altars close to the ship, so

hat short (and therefore light) shores can be employed. In the case of timber docks he altars are so far from the ship that the shores are of great length, very heavy and ery weak should any real strain be brought upon them.

Concrete as a material seemed to be highly regarded. In time it becomes as hard s stone; it is perfectly tight, easy to work, and the repairs are insignificant.

The above is a description, at some length, of the two docks which may be regarded s the latest developments of the types they represent. The examination of the other ocks of these types was instructive and interesting, but not of sufficient importance warrant encumbering a report with a detailed description.

The two types described are those that would be eminently desirable for this coun- y to copy in the effort to provide ample docking facilities for its battle ships and uisers, the choice of the type depending on the character of the situation or the cessity for prompt completion. The concrete or stone dock, its efficiency, cost, d time to build are too well known in this country to warrant any additional com- ent on my part.

In regard to the floating dock, I am informed by Messrs. Clark & Standfield that ey approximate the cost of a dock to lift 20,000 tons at £100,000 complete in Eng- nd, and the time ten months from signing the contract. This dock would be of ch scantling as to work in 47 feet of water, the ship drawing 30 feet, the keel blocks feet, and the depth of pontoon 13 feet. The increased cost of building in this untry would not be great, probably not greater than 25 per cent.

The efficiency of the system has long since been so clearly demonstrated and has en testified to so strongly in the great number of these docks actually in use or der construction that it remains for me simply to add my own opinion to those of r more experienced persons who have been for years associated with these docks, at under conditions where cheapness and time of delivery are essential elements ith efficiency, the floating dock is a thoroughly satisfactory structure.

The docks described are large docks of maximum capacity. It would seem that ch docks should not be used for torpedo craft, and with this end in view I endeav- ed to find a suitable arrangement for such vessels. The type of floating dock rep- sented by the Barrow depositing dock or depositor commends itself to me as the eapest, most readily constructed, and simplest device by which torpedo vessels ay be lifted, examined, repaired, or deposited on a railway or shore for stowage. uch a dock can be built for less than $75,000 in this country, and can lift any estroyer in ten minutes. The German navy has just provided such an arrange- ent, and it is said to work admirably. For the ordinary boats it is believed that e depositor, in combination with a proper railway, can launch a boat every fifteen inutes.

While the floating dock, lifted by pontoons, is an American idea (frankly admitted such by Messrs. Clark & Standfield), yet the development of that idea into e magnificent structures now in use all over the world is due to the engineers f this firm, who have carefully worked out all details from practical experience. fter years of such experience the Havana dock has been produced, in which a aximum efficiency in lifting power per ton of structure has been obtained, with erfect and instant control of every compartment of the dock, without which ontrol a floating dock is a very dangerous tool. If such docks are to be built for he Government, it is most earnestly recommended that for the sake of justice as well as assured efficiency, the working drawings be obtained from Messrs. Clark & Standfield.

Appended to this report are the following papers:

(A) Department's orders No. 77318 to proceed to Europe.
(B) Recent improvements in docks and docking appliances.
(C) A short description of modern floating docks.
(D) The Hamburg Off-shore Floating Dock.
(E) The Barrow Depositing Dock.
(F) Off-shore floating dock.
(G) Depositor docking a section of itself.
(H) Six thousand ton depositing dock for Barcelona.
(I) Depositing dock at Barcelona.
(J) Off-shore floating dock for Cardiff.

Very respectfully,

ROBERT B. DASHIELL,
Assistant Naval Constructor, U. S. N.
Member of Board.

Commodore F. M. BUNCE, U. S. N.,
Senior Member of Board on Docks,
Navy-Yard, New York, N. Y.

A.

NAVY DEPARTMENT,
Washington, August 18, 1897.

SIR: Proceed to New York, N. Y., and thence to London, England, taking passage in the Cunard Line steamer *Campania*, sailing from New York on August 21, 1897. Upon your arrival in London you will proceed to such other places in Europe as you may deem expedient for obtaining the information desired by the board on docks, of which you are a member, on the subject of docks of all classes actually in use or projected. Consult with the United States naval attachés, who are already in communication with the board, and request them to give you such facilities as may lie in their power.

Use all diligence to expedite the performance of this duty, and upon its completion return to Washington, D. C., and resume your present duties.

Pay Inspector James E. Tolfree, U. S. N., Navy pay office, New York, N. Y., has been directed to secure your transportation from New York to London, England.

Respectfully,

T. ROOSEVELT, *Acting Secretary.*

Assistant Naval Constructor ROBERT D. DASHIELL, U. S. N.,
Bureau of Construction and Repair, Navy Department, Washington, D. C.

APPENDIX K.

IENSIONS OF DRY DOCKS IN GOVERNMENT NAVY-YARDS.

GREAT BRITAIN.

r and kind.	Material of construction.	Length over all.	Length on blocks.	Width of entrance.	Depth over sill M. H. W.
		Feet. In.	*Feet. In.*	*Feet. In.*	*Feet. In.*
ng	Stone, concrete, or brick	225 0	203 6	57 6	16 0
ng	do	408 6	384 9	65 0	23 6
ng	do	363 6	336 6	63 6	23 6
ng	do	253 0	232 0	62 9	21 0
ng. D	do	456 3	416 0	80 0	31 6
ng, E	do	456 3	416 0	80 0	31 6
ng, F	do	457 3	416 0	82 0	32 0
ng, G	do	457 3	416 0	82 0	32 0
k, {K, M}	do	477 6	436 0	94 6	32 0 33 6
k, {I, L}	do	479 6	438 0	84 6	33 0
	do	281 4	268 9	57 6	25 3
	do	251 9	230 6	57 9	25 3
	do	280 9	268 6	63 6	25 9
	do	203 6	177 3	50 3	19 9
	do	187 0	176 0	58 6	14 9
nd Gosport:					
	do	253 6	228 3	57 6	19 9
	do	252 9	221 6	63 4	23 9
	do	287 0	275 3	67 6	25 9
	do	286 3	279 3	67 6	25 9
	do	230 4	209 4	55 4	19 9
	do	220 0	189 9	53 0	19 3
ble dock	do	658 0	648 9	80 6 88 6	27 6 27 9
	do	340 0	307 0	70 0	22 4
	do	304 6	.....	65 0	.....
	do	427 0	401 6	70 0	27 9
	Stone and concrete	456 0	415 0	80 0	33 4
	do	456 0	416 0	82 0	33 9
	do	563 6	550 0	82 0	33 10
	do	563 6	550 0	94 0	33 10
k D	Stone, concrete, and brick	452 0	428 0	82 0	41 6
k {B, E}	do	466 0	458 0	82 0	42 6 33 9
k {C, F}	do	466 0	458 0	82 0 80 0	41 6 33 4
	Stone, concrete, or brick	305 6	303 6	65 0	27 9
	do	437 0	415 6	73 0	32 0
	do	408 0	400 0	94 0	35 3
	do	273 6	263 6	64 9	19 6
	do	358 8	347 3	80 0	25 9
	do	311 0	295 0	80 0	22 9
	do	421 5	417 0	80 0	26 9
	do	253 0	253 0	80 0	33 9
	do	455 0	425 0	94 0	32 9
o. 1 Dock	do	404 0	387 8	75 0	25 2
ing	do	850 0 550 0 450 0	....	95 0 95 0 95 0	35 6 35 6 35 6
le		256 0 300 6	525 0	81 3 73 0	25 0 25 0
		468 0	427 8	79 9	33 6
		526 6	520 0	94 0	33 6

DIMENSIONS OF DRY DOCKS IN GOVERNMENT NAVY-YARDS—Cont'd.

GREAT BRITAIN—Continued.

Harbor and kind.	Material of construction.	Length over all.	Length on blocks.	Width of entrance.	Depth over sill M. H. W.
		Feet. In.	*Feet. In.*	*Feet. In.*	*Feet. In.*
Bombay:					
Lower Bombay			256 0	51 10	16 6
Middle Bombay			183 0	51 10	16 6
Upper Bombay			199 0	45 9	14 6
Lower Duncan			316 6	60 0	24 0
Upper Duncan			287 6	60 0	24 0
New Torpedo			154 0	25 0	13 6
Calcutta:					
(1)		350 0	330 0	60 0	22 0
(2)		533 0	511 0	70 0	24 6
(3)		197 0	180 0	46 0	15 6
Brisbane		457 0	431 6	60 0	18 0
Sydney:					
(1)		638 0	600 0	84 0	32 0
(2)		506 0	450 0	59 0	21 6
Esquimalt	Stone	480 0	430 0	58 0	26 6
St. Johns, N. F.: Graving	Wood		600 0	85 0	25 0
Kingston, Ont		280 0		50 0	16 0
Bermuda: Floating	Iron	381 0	330 0	84 0	25 0

FRANCE.

Toulon and La Seyne:					
Vauban (1)	Stone	246 0		53 0	19 0
Vauban (2)		246 0		54 8	20 6
Vauban (3)		283 0		53 9	24 6
Castigneau (1)		326 4	300 0	62 3	29 0
Castigneau (2)		385 6	367 0	62 0	30 0
Castigneau (3)		531 4	497 0	62 0	30 0
Missiessy (1)		426 6	383 0	88 0	32 9
Missiessy (2)		426 6	383 0	88 0	32 9
Missiessy (3)		574 0		94 10	30 6
Three floating docks for torpedo boats.					
Cherbourg:					
(1)		355 0	300 0	59 8	30 0
(2)		390 0	330 0	59 8	30 0
(3)		390 0	330 0	59 8	30 0
(4)		355 0	300 0	59 8	30 0
(5)		495 0	455 0	89 0	37 0
(6)		508 6	461 0	59 8	26 6
(7)		264 6	237 6	59 8	18 0
(8)		257 3	219 0	59 8	18 0
Gridiron		164 0		46 0	
L'Orient:					
(1)		380 6	365 0	52 0	22 3
(2)		508 6	488 9	64 0	26 0
Brest:					
(1) double		285 8		65 6	20 0
(3) double		259 6		65 3	20 0
(2) double		250 0		53 9	11 0
(4) double		271 9		53 9	11 0
(5)		358 6		65 6	31 0
(6)		223 4		48 6	19 0
(7) double		398 0		85 6	31 0
(8) double		347 6		65 6	31 0
(9)		318 9		66 0	31 0
Floating	Wood	262 4		32 8	
Gridiron		370 0			
Do		106 0			
Rochefort:					
(1) double		195 0		51 6	15 0
(2) double		246 0		47 0	16 6
(3)		269 9		68 6	25 6
Martinique:					
Graving	Stone	418 0	365 0	85 4	28 0
Saigon:					
(1)		508 6		74 9	25 0
(2)		237 0		31 6	10 0
Algiers:					
(1)	Stone	455 6	360 0	86 6	30 6
(2)	do	248 0	180 0	73 4	22 3

DIMENSIONS OF DRY DOCKS IN GOVERNMENT NAVY-YARDS—Cont'd.

ITALY.

Harbor and kind.	Material of construction.	Length over all.	Length on blocks.	Width of entrance.	Depth over sill M. H. W.
		Feet. In.	*Feet. In.*	*Feet. In.*	*Feet. In.*
ipezia:					
(1)	Stone	357 6	.....	71 0	30 3
(2)	do	429 8	.....	77 4	30 3
(3)	do	429 8	.....	77 4	30 0
(4)	do	357 6	.....	71 0	30 0
(5)	do	705 3	.....	a 106 0 b 81 0	33 0
(6)	do	508 6	.....	99 0	33 0
Floating		105 0	.....	24 0	5 6
aples		242 3	229 7	64 0	20 4
Floating (1)		104 11	.....	31 8	13 6
Floating (2)		60 1	.....	24 0	9 2
rasina	Stone	351 0	.....	71 6	26 3
nice:					
(1)	do	526 0	499 0	79 0	28 6
(2)	do	295 0	.....	58 0	19 6

UNITED STATES.

rtsmouth: Balance	Wood	350 0	.....	60 6	25 0
ston: Graving	Granite	396 5½	.....	60 0	24 10
w York:					
(1) Graving	do	369 3	.....	66 0	25 3
(2) Graving	Wood	500 0	.....	52 10½	25 6
(3) Graving	do	670 0	.....	71 7½	29 0
ague Island: Graving	do	500 0	.....	52 10½	25 6
rfolk:					
(1) Graving	Granite	331 9	.....	60 0	25 0
(2) Graving	Wood	500 0	.....	52 10½	25 6
rt Royal: Graving	do	495 0	.....	66 0	26 0
are Island: Graving	Granite	513 0	.....	80 6½	27 6
get Sound: Graving	Wood body, masonry entrance.	650 0	.....	92 7½	30 0

GERMANY.

ntzig: Sectional	Iron	322 0	.....	70 9	20 6
el:					
(1) Graving	Stone	423 0	407 0	77 0	27 6
(2) Graving	do	382 0	377 0	72 0	25 6
(3) Graving	do	362 0	357 0	72 0	22 6
(4) Graving	do	344 0	334 0	72 0	19 4
Floating	do	236 9			
lhelmshaven:					
(1) Graving	Concrete and granite	438 0	410 0	72 0	27 3
(2) Graving	do	438 0	410 0	72 0	27 0
(3) Graving	do	370 0	354 0	61 6	22 0
(1) Floating		111 6	111 6	49 0	29 6
(2) Floating		180 0	114 6	49 0	29 6

NORWAY AND SWEDEN.

ckholm	Stone	301 6	.....	58 6	22 9
ristiansand: Graving		324 0	308 0	45 0	18 0
rten: Graving		356 3	257 0	61 3	23 8
tarona:					
Old graving		243 9	.....	49 3	17 6
(1) Graving		182 0	.....	50 4	18 6
(2) Graving		253 0	.....	50 6	20 0
(3) Graving		192 0	.....	50 6	20 0
(4) Graving		203 0	.....	50 6	20 0
(5) Graving		203 0	.....	50 6	20 0

a Section 1. b Section 2.

DIMENSIONS OF DRY DOCKS IN GOVERNMENT NAVY-YARDS—Cont'd.

JAPAN.

Harbor and kind.	Material of construction.	Length over all.	Length on blocks.	Width of entrance.	Depth over si M. H.
		Feet. In.	*Feet. In.*	*Feet. In.*	*Feet*
Yokosuka:					
(1)	Stone	392 0	377 3	82 0	2
(2)	do	502 4	482 8	94 3	2
(3)	do	306 4	289 8	45 3	1
Tokyo		300 0		52 0	1
Hakodate		420 0		48 0	2
Sasebo		419 11		115 0	3
Kure		464 4		81 6	4
Nagasaki		522 0	310 0	82 0	2
Akanawara		371 0	350 0	78 0	2

RUSSIA.

Sebastopol	Stone	580 0	500 0	82 0	1
Cronstadt:					
(1)		487 0		82 0	1
(2)		500 0		85 0	1
(3) Large dock					
Libau: Floating dock		600 0		85 0	1
Vladivostok: Floating dock		301 0			1
	Granite	666 0	601 0		1

NETHERLANDS.

Helder:					
(1)	Stone	374 4		63 8	
(2)	do	273 6		59 8	
Helvoetsluis: Double	Brick	500 0	225 0 235 0	49 0 50 0	
Batavia:					
Floating		324 0		66 0	
Cylinder		180 0		30 0	
Surabaya:					
Floating	Iron	328 0		74 8	
Do	do	196 9		62 0	

CHINA.

Tientsin			340 0	39 0	
Shanghai	Timber	340 0			
Foochow		480 0		90 0	
Fuchan		440 0		70 0	
Whampoa:					
(1)	Granite	500 0		85 0	
(2)	do	350 0		59 0	
Port Arthur		445 6	422 5	122 4	

SPAIN.

Cadiz:					
(1)		259 6	237 0	55 0	
(2)		371 0	328 0	70 0	
(3)		219 0	192 0	51 0	
Cartagena: Floating		350 0		105 0	
Ferrol		475 9		82 0	
Subic: Floating		450 0		117 0	

Appendix L.

DIMENSIONS OF PRINCIPAL NAVAL SHIPS.

Length.	United States.		France.		Germany.		Great Britain.		Italy.		Japan.		Russia.		Spain.	
	Armored.	Cruisers.	Armored.	Cruisers.	Armored.	Cruisers.	Armored.	Cruisers.	Armored.	Cruisers.	Armored.	Cruisers.	Armored.	Cruisers.	Armored.	Cruisers.
et								2								
99 feet			1										1			
49 feet	1	2	1	3			3	7	5		1		2	2		
99 feet	7		12	4	9	1	26	25			1	4	6	1	1	
49 feet	5	7	17	28	6	6	29	49	12	1	2	7	12	1	11	2
99 feet	7	9	13	16	3	5	16	22	5	19		5	14	4		3
49 feet	13	6	7	14	8	18	15	54		18	5	9	8	21		15
99 feet		10	8	23	10	3		38		10		5		10		19
49 feet				7	1	3		9		2		1	2		1	
BEAM.																
et													1			
et													1			
feet							18		3		1					
feet	6		5				11	2	2		1		4			
feet	3		14		8		10	9	5				14		5	
feet	4		2		7		10	9	2				4		3	
feet	5	2	23	2	1	1	20	4	4		1			2	4	
feet		1	2	5	4		10	20	2			3	9			2
feet	8	6	5	8	6	4	7	20	3		1	6	4	2		2
feet	6	6	4	15		8	8	34	1	11	4	4	9	2		4
feet		11		12	11	1		28		9		3		13		
feet		7	4	11		13		31		7	1	6		8		8
feet		1		17		9		38		20		9		2	1	11
feet				22				11		1				9		9
feet				3						2				1		
t 6 inches									2							
t			2													
t 6 inches			1													
t 6 inches			1						3							
t			2				1									
t 6 inches	4		10				32		3		1					
t			3		1		6	2	2				2			
t 6 inches	1		3				10				1		3			
t	1			1	4		2	9					6			
t 6 inches	2		2	2			8	1					2		2	
t	3		6	2	8			1	3				3		2	
t 6 inches				1				1					1			
t	1		2				6	8	2				5		2	
t 6 inches			5	1			3	1								
t			1	3		1		1	4				3			
t 6 inches	1	2		1			6									
t			2	2		1	1	5	1						3	
t 6 inches			2	4			1	2				3			3	
t		1	1	2		2	1	9					3			2
t 6 inches		1		5			1	5								1
t			1	1	3	1		5	1		1			1		2
t 6 inches		2	3	3	1		1	11	1	1			1			
t		3		4				9		3				1		
t 6 inches	1			1		7				1	1	4				
t		4		4	8	1	1					2	1			
t 6 inches			1	3				11		1	3		2	1		
t			2	2			2	9		10		2	3	1		
t 6 inches	1						4	11				3		4		3
t			1	2	1			4			1	1				
t 6 inches	2			7		1	2	10					1			
t	2			3		4	1			1		4	2	1		
t 6 inches	1	4						3		2		1		1		
t	4	3		7		3		3		1	1			5		

DIMENSIONS OF PRINCIPAL NAVAL SHIPS—Continued.

Length.	United States.		France.		Germany.		Great Britain.		Italy.		Japan.		Russia.		Spain.	
	Armored.	Cruisers.	Armored.	Cruisers.	Armored.	Cruisers.	Armored.	Cruisers.	Armored.	Cruisers.	Armored.	Cruisers.	Armored.	Cruisers.	Armored.	Cruisers.
13 feet 6 inches	1	2				2		5		2		1	1			
13 feet		4		5		1						4	1			
12 feet 6 inches		2		2		2		4		3						7
12 feet		2	4					9		8		1				1
11 feet 6 inches	8	1		8		3		12		3				3		3
11 feet		1						3				1	4	5		2
10 feet 6 inches			4	13	11	2		3		6		1	1	1		6
10 feet		2				3		6		2		3		1		
9 feet 6 inches				2				2		2				2		
9 feet								17		1				3		1
8 feet 6 inches				1				13		1				1		7
8 feet								1								
7 feet 6 inches														5		
7 feet										2						1
6 feet 7 inches																1
6 feet				8												

APPENDIX N.

COST OF REPAIRS TO DOCKS.

UNITED STATES NAVY-YARD, NEW YORK,
October 1, 1897.

SIR: I forward herewith the reports received from the Bureau of Yards and Docks upon the cost of repairs of dry docks, which form a part (N) of the appendix to the report of the Board on Dry Docks.

The reports upon the present condition of the timber dry docks on the Atlantic Coast, which was to be marked O, will form a part of the appendix of the supplementary report of the board, now in preparation.

Very respectfully,

F. M. BUNCE,
Commodore, U. S. N., Senior Member Board on Dry Docks.

THE SECRETARY OF THE NAVY,
Washington D. C.

UNITED STATES NAVY-YARD, NEW YORK,
September 15, 1897.

SIR: The Board on Dry Docks requests that it be furnished information regarding the experience of the Bureau of Yards and Docks as to the relative cost of repairs of timber and stone graving docks and floating docks; and such information as can be gathered from its files regarding the cost of repairs of other kinds of docks.

The board further requests a statement of opinion and experience as to the relative merits of graving docks constructed wholly of timber, or stone, or concrete, or of combinations of these materials, and also of floating docks constructed of timber, iron, and steel.

Very respectfully,

F. M. BUNCE,
Commodore, U. S. N., Senior Member Board on Dry Docks.

THE CHIEF OF BUREAU OF YARDS AND DOCKS,
Navy Department, Washington, D. C.

SUMMARY OF ACCOMPANYING REPORTS.

PORTSMOUTH, N. H.

The timber floating dock was completed November, 1851, at a cost of $437,325, and the repairs to June 30, 1897, have amounted to $193,419.84, or approximately $4,300 per annum.

The cost of repairs for the years ending June 30, 1866, and June 30, 1867, is not given.

BOSTON, MASS.

The stone dry dock was completed June 24, 1833, at a cost of $677,089.98, and was extended during 1857–1860, at a cost of $223,000. The repairs from 1866 to 1897, charged to the dock proper, amount to $62,001.77, or an average of about $2,500 per annum.

The cost of repairs for the years 1876–77, 1886–87, 1888–89, 1889–90, 1894–95, 1895–96, is not given.

NEW YORK.

The granite dry dock was completed in September, 1851, at a cost of $2,008,408.61.
The repairs upon the dock proper for the years of which the records are at hand have cost $167,551.10, or about $5,100 per annum
The cost of repairs for the years 1851–1862, 1865–66, and 1890–91 is not given.
The dry dock No. 2 (timber) was completed in February, 1890, at a cost of $571,955.03.
The repairs upon the dock proper, which were made between February, 1890, and June 30, 1897, have cost $1,982.29, or $283.18 per annum.
No repairs were made upon the dock proper for the first two years after the completion of the dock.
By reference to the report upon the present condition of this dock it will be seen that the dock is now in need of extensive repairs.
The dry dock No. 3 (timber) was completed April 7, 1897, at a cost of $554,707.08, and is now under repairs.

LEAGUE ISLAND, PA.

The timber dry dock was completed in 1891 at a cost of $550,000.
The repairs upon the dock proper, which were made between 1891 and June 30, 1897, have cost $10,326.76, or an average of about $2,000 per annum.
The cost of repairs for the year ending June 30, 1896, has not been given.
Sixty-four thousand dollars has been appropriated to repair this dock during the current year.

NORFOLK, VA.

The granite dry dock was completed in March, 1834, at a cost of $943,676.73.
The total repairs from March, 1834, to June 30, 1882, have cost $356,323.27, or an average of about $7,500 per annum.
The repairs upon the dock proper which have been made between June 30, 1883 and June 30, 1897, have cost $18,775.68, or about $1,400 per annum.
The cost of repairs for the years ending June 30, 1893, and June 30, 1894, has not been given.
The timber dry dock was completed October 14, 1889, at a cost of $496,981.87.
The repairs upon the dock proper which have been made between October 1 1889, and June 30, 1897, have cost $14,396.07, or about $2,000 per annum.
The cost of repairs for the year ending June 30, 1895, has not been given.
This dock is now undergoing very extensive repairs, estimated cost not known.

PORT ROYAL, S. C.

The timber dry dock was completed August 15, 1895, at a cost of $521,599.89.
The repairs upon the dock proper which were made in 1896 and 1897 have cost $4,262.59, or about $2,100 per annum.

WASHINGTON, D. C., *September 27, 1897.*

SIR: In reply to board's request dated 15th instant, I have the honor to submit the cost of repairs of the docks at Portsmouth, N. H., Boston, Mass., League Island, Pa., Norfolk, Va., and Port Royal, S. C.
The data is very inexact, but the best we can do in the time.

Very respectfully,

E. O. MATTHEWS,
Chief of Bureau Yards and Docks.

Commodore F. M. BUNCE,
President Dry Dock Board, New York.

NAVY-YARD, PORTSMOUTH, N. H.,
September 23, 1897.

SIR: In compliance with Bureau of Yards and Docks' letter No. 5787, September 16, 1897, I have the honor to submit a report of the original cost and expenditures for repairs on the floating dry dock and its appendages at this station from the time of its completion to June 30, 1897.
The records in this office for the years 1854–55–56 are somewhat incomplete, and have taken the expenditures for these years from Preble's History of the Portsmouth

Navy-Yard, prepared by order of the Navy Department, which I believe to be authentic, as the other items practically coincide with the office records.

The charge for dredging appears to be a legitimate charge against the dock. This was done in order to sink the dock properly and did not belong to the approaches of the gate.

There is no separate charge for repairs to pumping apparatus, which have probably been charged to the dock with the other repairs.

Very respectfully,

H. B. ROBESON,
Captain U. S. N., Head Department Yards and Docks,

The COMMANDANT.

UNITED STATES NAVY-YARD, PORTSMOUTH, N. H.,
September 23, 1897.

Report showing the cost of floating dry dock and its appendages to June 30, 1897.

Original cost of floating dry dock		$437,325.00
Cost of repairs to dry dock for year ending June 30—		
1853	$1,339.45	
1854	2,142.75	
1855	4,481.82	
1856	2,545.80	
1857	3,394.39	
1858	4,808.69	
1859	1,919.85	
1860	2,202.69	
1861	1,279.88	
1862	1,888.57	
1863	1,633.97	
1864	2,857.60	
1865	8,851.29	
1868	2,499.14	
1869	1,960.81	
1870	5,022.74	
1871	2,250.26	
1872	2,807.74	
1873	76,224.21	
1874	2,736.49	
1875	245.28	
1876	1,408.54	
1877	919.95	
1878	1,020.61	
1879	5,658.67	
1880	9,089.75	
1881	1,351.32	
1882	815.42	
1883	331.60	
1884	620.92	
1885	251.35	
1886	69.62	
1887	1,229.65	
1888	22,748.20	
1889	315.07	
1890	1,270.14	
1891	1,797.43	
1892	174.92	
1893	402.85	
1894	72.19	
1895	6.08	
1896	355.68	
1897	10,416.46	
		193,419.84
Total cost to June 30, 1897		630,744.84

Basin, railway, and gate.

Original cost of basin, railway, and gate		$295,580.00
Cost of repairs on dock basin for year ending June 30—		
1856	$536.17	
1857	3,304.31	
1858	6,618.83	
1859	14,257.07	
1860	3,816.31	
1861	120.25	
		28,652.44
Cost of repairs on railway, etc., from dock for year ending June 30—		
1866	16,288.50	
1867	14,723.89	
1889	6,853.77	
1890	2,966.72	
		40,832.88
Total cost to June 30, 1897		365,065.32
Cost of dredging in front of basin for year ending June 30—		
1856		19,037.50
1857		6,068.91
1858		4,658.48
Total		29,764.89

RECAPITULATION.

Floating dry dock:		
Original cost	$437,325.00	
Repairs	193,419.84	
		$630,744.84
Basin, railway, and gate:		
Original cost	295,580.00	
Repairs on basin	28,652.44	
Repairs on railway	40,832.88	
		365,065.32
Dredging in front of basin		29,764.89
Total cost of dry dock and appendages		1,025,575.05

Repectfully submitted.

H. B. ROBESON,
Captain, U. S. N., Head Department Yards and Docks.

NAVY-YARD, BOSTON, MASS.,
September 22, 1897.

SIR: In compliance with the commandant's indorsement on bureau letter No. 5787-97, dated September 16, 1897, "requesting a statement of the cost of dry dock, and repairs to same since its completion; also, to specify how much for repairs to dock proper, pumping plant, caisson or gates, and how much for extension to dock," I respectfully submit the following data, collated from the records in this department:

There is at this yard one granite stone dry dock, furnished with swinging gates and caisson.

There is cut in the face of coping at the head of this dry dock, "Commenced 10th July, 1827." "Opened 24th June, 1833."

This department is not in possession of any record indicating the first cost of this dry dock; a copy of the contract for the first pumping engine, dated November 4, 1830, intimates the units of cost of the various kinds of metal used in its construction, but conveys no information as to the total cost. There is also to be noted a copy of a letter from Commodore Morris, U. S. N., to Commodore John Rogers, president of the Board of Navy Commissioners, under date of July 2, 1830, stating that an approved account of "Mr. Baldwin, engineer of the docks," had been forwarded therewith.

From the date of this letter and until 1855 no record appears, either of fact or financial exhibit, pertaining to this dock.

During 1855-1857 a new steam engine was installed at a cost of $20,859.72.

The extension of the dry dock was undertaken during 1857–1860 at a cost of $223,000. There was an appropriation made for "Paving and draining around dry dock," $36,500 in 1863, against which some repointing of the mason work was charged, to an unknown amount.

The following schedule exhibits in consecutive order, by years, the only amounts found charged against the dry dock, pumping plant, and caisson and gates.

Year.	Dry dock.	Pumping plant.	Caisson or gates.
1866–67	$1,806.23		
1867–68	3,157.19		
1868–69	45.45		
1869–70	6,698.19		
1870–71	396.12		
1871–72	206.64		
1872–73	4,592.86		
1873–74	3,886.91		
1874–75	31,620.07		
1875–76	52.26		
1876–77		$406.75	
1877–78	49.22		
1878–79	228.16		
1879–80	439.06		
1880–81	287.00		
1881–82	345.39		
1882–83	245.02		
1883–84	203.56		
1884–85	7.00		$137.86
1885–86	6.00		
1886–87		826.20	
1887–88	5,138.42		11,808.88
1888–89			1,066.20
1889–90			423.14
1890–91	1,200.48	1,127.27	
1891–92	367.78	48,872.73	275.00
1892–93	635.10		200.00
1893–94	72.56	1,001.03	10.56
1894–95		891.74	811.56
1895–96		232.21	11.56
1896–97	315.10	337.81	154.84
July 1 to September 1, 1897		69.25	
Total	62,001.77	53,764.99	14,889.62

Very respectfully,

J. W. PHILIP,
Captain, U. S. N., Head of Department Yards and Docks.

The COMMANDANT.

UNITED STATES NAVY-YARD, NEW YORK,
September 25, 1897.

SIR: In compliance with bureau's letter No. 5787, of September 16, 1897, to have prepared and submitted as soon as possible the cost of each of the dry docks at this navy-yard, with the cost of repairs put upon each since completion; stating cost of repairs specifically made to dry dock proper, pumping plant, caisson or gates, and extension of dock (if any), respectively, with dates by years, of such expenditures, etc., I respectfully report as follows:

The records found in this office, giving the data required, do not antedate the year 1860–61, or for ten years next succeeding the completion of the granite dry dock No. 1, and the cost of repairs for this period can not, therefore, be stated in this report.

The available data have been compiled from the annual report, beginning with the fiscal year 1860–61, which is the oldest copy found on file here; but the data are incomplete, as the reports for 1861–62 and 1865–66 state no account of expenditures of any kind; those for 1871–72 and 1872–73 and 1877–78 state only small sums expended under the regular repairs appropriation while describing a considerable amount of work actually done under other appropriations, the cost of which appears to have been merged in the gross amounts stated as expended under the general appropriations for navy-yards, etc., and the report for 1890–91 is missing altogether. It has been found impossible to separate the cost of repairs to caisson, gates, etc., and pumping plant from the general account of dry dock proper, except as given in the following tabulated statements:

Dry dock No. 1.—From Stuart's Naval Dry Docks it is found that this dock was commenced in September, 1841, and completed in September, 1851, at a net cost (includ-

ing dock proper, gates, caisson, pumping plant, and that portion only of the granite engine house now building, No. 10, occupied by the pumping plant) of $2,003,408.61 (page 111).

Cost of repairs, June 30, 1860, to June 30, 1897.

Year.	Dry dock proper.	Caisson, gates, etc.	Pumping plant.
1860–61		$827.69	
1861–62	(a)	(a)	(a)
1862–63	$11,141.98	90.97	
1863–64	4,321.53		
1864–65	8.24	1,244.82	(a)
1865–66	(a)	(a)	
1866–67	5,641.92		
1867–68	3,542.77		
1868–69	2,135.30		
1869–70	887.47		
1870–71	4,811.12		
1871–72	336.14		
1872–73	1,066.86		
1873–74	6,417.65		
1874–75	238.84		
1875–76	1,554.01		
1876–77	1,995.00		
1877–78	538.21		
1878–79	38.84		
1879–80	18.52		
1880–81	108.14		
1881–82	1,358.21		
1882–83	1,042.07		
1883–84	1,928.62	20,814.72	
1884–85	517.56		
1885–86	676.88		
1886–87	30,593.25		
1887–88	57,368.69		
1888–89	8,114.34		
1889–90	4,840.80		
1890–91	(a)	(a)	(a)
1891–92	1,234.39		
1892–93	4,006.88		
1893–94	2,850.99		
1894–95	1,451.50	155.80	
1895–96	6,294.40	28,649.96	
1896–97	963.98	92.68	
Total	167,551.10	51,876.64	

a Missing.

Grand total, $219,427.74.

NOTE.—A new steel caisson was built for this dock in 1895–96, at a cost of $28,805.76, which is included in the above expenditures of that year.

Dry dock No. 2 (timber).—This dock was commenced in November, 1887, and completed in February, 1890 (per tablet in pump house), at a cost, per contractor's final vouchers, June 4, 1890, $571,955.03.

Cost of repairs June 30, 1890, to June 30, 1897.

Year.	Dry dock proper.	Caisson, gates, etc.	Pumping plant.
1890–91			$269.72
1891–92			79.20
1892–93	$136.67	$1,242.44	63.14
1893–94	1.74	325.56	4.54
1894–95	156.78	93.36	1,076.25
1895–96	43.12	831.34	1,239.10
1896–97	1,644.03	10,224.23	364.04
Total	1,982.29	12,706.93	3,093.99

Grand total, $17,776.21.

NOTE.—The sum of $11,220.91 is included in the expenditures for 1896–97, as the cost of special repairs, occasioned by the accident to the caisson of this dock August 8, 1896.

Dry dock No. 3 (timber).—This dock was commenced in January, 1893, and accepted April 7, 1897, at a cost of $554,707.08, and is now under repairs.

Very respectfully,

A. G. MENOCAL,
Civil Engineer, United States Navy.

UNITED STATES NAVY-YARD, LEAGUE ISLAND, PA.,
September 20, 1897.

SIR: In compliance with bureau letter No. 5787-1897, of the 16th instant, I have the honor to transmit herewith a statement of the cost of the dry dock at this navy-yard, with cost of repairs to the several parts, itemized as per said letter.

Very respectfully,

C. C. WOLCOTT,
Civil Engineer, U. S. N., in Charge of Engineering Work.

The COMMANDANT.

Statement of the cost of the dry dock at this navy-yard, with cost of repairs to the several parts itemized as per said letter.

Year.	Original cost of dry dock.	Cost of repairs to dry dock proper.	Repairs to pumping plant.	Repairs to caisson.
1891	$550,000.00			
1892		$50.00	$180.00	
1893		5,140.13	377.88	
1894		4,912.00	418.63	
1895		100.06		
1897		a 64,124.57	2,656.00	$113.66
Total	550,000.00	74,326.76	3,632.51	113.66

a Sixty-four thousand dollars for new concrete coping for dry dock. Work not yet commenced.

SUMMARY.

Original cost of dry dock	$550,000.00
Repairs to dry dock proper	74,326.76
Repairs to pumping plant	3,632.51
Repairs to caisson	113.66
Total	$628,072.93

NAVY-YARD, NORFOLK, VA.,
September 24, 1897.

SIR: As directed by Bureau letter No. 5787/97, dated September 16, 1897, I forward herewith statement showing the cost of the granite and timber dry docks at this navy-yard to June 30, 1897.

In relation to the granite dock, will state that the original cost was taken from the report contained in "Stewart's Naval Dry Docks of the United States," and the repairs between the years 1834 and 1882 have been assumed to be the difference between the original cost and the total cost to June 30, 1882, as shown by the reports of the commission on navy-yards of which Commodore S. B. Luce, U. S. N., was president, dated December 1, 1883.

There are no records in this office which show the cost of repairs between the years 1834 and 1867, all papers and books having been destroyed during the late war.

Very respectfully,

P. C. ASSERSON,
Civil Engineer, U. S. N.

Respectfully forwarded.

W. W. MEAD,
Commander, U. S. N., Acting Captain of the Yard.

The COMMANDANT,
Navy-Yard, Norfolk, Va.

Report of original cost of the granite dry dock, located at the Norfolk Navy-yard, cost of repairs to June 30, 1882, and yearly from June 30, 1882, to June 30, 1897.

Original cost (completed in March, 1834)		$943,676.73
Cost of repairs, March 24 to June 30, 1882		356,323.27
Cost of repairs to June 30, 1883:		
Dock	$63.64	
Caisson, etc	68.79	
Pumping plant	197.01	
		329.44

Cost of repairs to June 30, 1884:		
Dock	$142.14	
Caisson, etc	611.23	
Pumping plant	8,718.31	
		9,741.68
Cost of repairs to June 30, 1885:		
Dock	815.33	
Caisson, etc	128.32	
Pumping plant	634.08	
		1,577.73
Cost of repairs to June 30, 1886:		
Dock	54.97	
Caisson, etc	3.00	
Pumping plant	144.12	
		202.09
Cost of repairs to June 30, 1887:		
Caisson, etc	13.00	
Pumping plant	1,686.08	
		1,699.08
Cost of repairs to June 30, 1888:		
Dock	235.76	
Caisson, etc	2,834.07	
Pumping plant	562.30	
		3,632.13
Cost of repairs to June 30, 1889: Dock		884.68
Cost of repairs to June 30, 1890:		
Dock	77.44	
Pumping plant	10.88	
		88.32
Cost of repairs to June 30, 1891:		
Dock	25.79	
Caisson, etc	269.03	
Pumping plant	2.92	
		297.74
Cost of repairs to June 30, 1892:		
Dock	156.97	
Pumping plant	112.36	
		269.33
Cost of repairs to June 30, 1895:		
Dock	565.12	
Caisson, etc	87.69	
Caisson (new)	26,269.03	
Pumping plant	40.00	
		26,962.04
Cost of repairs to June 30, 1896: Dock		15,744.73
Cost of repairs to June 30, 1897:		
Dock	9.12	
Caisson, etc	262.53	
		271.65
Total		1,361,430.63

RECAPITULATION.

Granite dry dock	$1,318,775.68
Caissons or floating gates	30,546.89
Pumping plant	12,108.06
Total	1,361,430.63

Report of original cost of the timber dry dock located at the Norfolk Navy-Yard, miscellaneous items connected with removal of buildings from site of same, pay of leveler, etc., and yearly cost of repairs since date of completion.

Original cost (completed October 14, 1889)		$436,961.87
Miscellaneous items (cleaning, site, etc.)		7,993.25
Cost of repairs to June 30, 1890:		
Dock	$907.43	
Pumping plant	466.12	
		1,373.55

Cost of repairs to June 30, 1891:		
Dock	$33.60	
Pumping plant	5.60	
		$39.20
Cost of repairs to June 30, 1892:		
Dock	355.75	
Caisson	1,012.99	
Pumping plant	338.53	
		1,707.27
Cost of repairs to June 30, 1893:		
Dock	801.54	
Pumping plant	37.38	
		838.92
Cost of repairs to June 30, 1894:		
Dock	315.09	
Pumping plant	5,134.60	
		5,449.69
Cost of repairs to June 30, 1896: Dock	1,784.67	
		1,784.67
Cost of repairs to June 30, 1897:		
Dock	11,105.42	
Caisson	519.83	
Pumping plant	2,390.31	
		14,015.56
Total		530,183.98

RECAPITULATION.

Timber dry dock	520,338.69
Caisson or floating gate	1,532.82
Pumping plant	8,312.54
Grand total	530,183.98

UNITED STATES NAVAL STATION,
Port Royal, S. C., September 20, 1897.

SIR: In compliance with Bureau's 5878, 1897, of 16th instant, the cost of the dry dock at this station and repairs to same since completed is respectfully submitted.

Very respectfully,

GEORGE MACKAY, *Civil Engineer, U. S. N.*

The COMMANDANT.

Statement of cost of dry dock and repairs to same.

Cost of construction		$499,999.13
Paid contractor for loss and damage by cyclone of 1893		18,521.42
Miscellaneous expense		3,079.34
Total		521,599.89
Repairs:		
Dock proper—		
1896	$942.20	
1897	3,320.39	
Caisson—		
1895	294.55	
1896	303.99	
1897	177.78	
Pumping plant—		
1895	375.21	
1896	304.86	
1897	170.60	
		5,889.58
Total cost		527,489.47

EXHIBIT No. 4.

FOR A DRY DOCK AT ROUND BAY.

Governor Lowndes sends a message to the senate in advocacy of it.

Annapolis, Md., January 24.—Governor Lowndes sent to the senate to-day a message relative to the resolution passed by the city council of Annapolis relating to the desired action to be taken by the Representatives in Congress from Maryland looking to the establishment of a dry dock at Round Bay, for the purpose of docking and repairing vessels of the United States Navy. The governor, in his message, says:

"The document accompanying this message (the resolutions of the council) shows fully the need of such a dock as is proposed, and the advantages of the location mentioned, and in suggesting action on the part of your bodies in this behalf I need only say that recently the United States Government has had to send one of its largest vessels to Nova Scotia to be docked, for the reason that we had no dock accessibly located which was large enough for the purpose. I therefore suggest that a joint resolution be passed requesting Maryland's Representatives in Congress to use their best efforts in this behalf, and in such resolution it might, in view of the great advantages which would accrue to our own people, be proper to pledge for the State of Maryland the dedication of the necessary land to the United States Government for the purposes required. As will be seen by the accompanying document, a bill appropriating $1,500,000 for this purpose has already been introduced in the Senate of the United States by Senator Gorman, and I deem it as peculiarly important that your bodies should take prompt and appropriate steps looking to the accomplishment of the desired object."

STATE OF MARYLAND, EXECUTIVE DEPARTMENT,
Annapolis, January 24, 1898.

To the Honorable the General Assembly of Maryland:

GENTLEMEN: I beg leave to submit herewith resolutions passed by the city council of Annapolis relative to desired action to be taken by the Representatives from Maryland, in the Congress of the United States, looking to the establishment of a dry dock at Round Bay, on the Severn River, for the purpose of docking and repairing vessels of the United States Navy.

The document accompanying this message shows fully the need of such a dock as is proposed, and the advantages of the location mentioned, and in suggesting action on the part of your bodies in this behalf, I need only say that recently the United States Government has had to send one of its largest vessels to Nova Scotia to be docked for the reason that we have no dock accessibly located which was large enough for the purpose.

I therefore suggest that a joint resolution be passed requesting Maryland's Representatives in Congress to use their best efforts in this behalf, and in such resolution it might, in view of the great advantage which would accrue to our people, be proper to pledge for the State of Maryland the dedication of the necessary land to the United States Government for the purposes required.

As will be seen by the accompanying document, a bill appropriating $1,500,000 for this purpose has already been introduced in the Senate of the United States by Senator Gorman, and I deem it of peculiar importance that your bodies should take prompt and appropriate steps looking to the accomplishment of the desired object.

Respectfully submitted.

LLOYD LOWNDES, *Governor.*

EXHIBIT No. 5.

JOINT RESOLUTIONS and memorial of the general assembly of the State of Maryland to Congress to improve the Severn River, in Maryland, and to establish a national naval dry dock thereon.

Whereas under date of November 15, 1897, the Secretary of the Navy, in his annual report to the President of the United States for the year 1897, recited that the most urgent need of the naval service, on that date, was an increase of naval docking facilities, the lack of which he declared Congress should remedy at the earliest moment possible, because the necessity therefor was imperative; and also recited that the Government then owned only 11 dry docks—9 on the Atlantic and 2 on the Pacific—7 being of timber and 4 of stone, and that very few of the larger

docks on the Atlantic were in a condition proper for effective use, so much so in August, 1897, as to necessitate his sending the U. S. battle ship *Indiana* to Halifax, Nova Scotia, to be there docked on an English dry dock, of which, he further recited, that Great Britain then owned 611, 28 of which accommodate first-class battle ships, 14 of which ships could at one time be docked in the two dock yards of Chatham and Portsmouth, England, alone (at which two yards all the dry docks are of stone), and

Whereas, under date of December 6, 1897, the President of the United States, in his regular message to Congress, emphasized this condition of naval affairs, by reporting "that it was an unfortunate fact that there was on that date only one Government dry dock on the Pacific coast capable of docking our largest ships of war, and only one on the Atlantic coast of similar capacity, and that the latter had been undergoing repairs for the last six or seven months, and was then incapable of public use," and recommended that Congress take immediate steps to provide three or four new dry docks on the Atlantic capable of docking our largest ships of war; and

Whereas, under date of December 9, 1897, the Senate of the United States unanimously adopted a resolution (Senate No. 187, introduced by Senator Chandler, ex-Secretary of the Navy) directing its Committee on Naval Affairs to inquire into the needs of the Navy for additional docks and concerning the proper location of any new stationary dry docks, and to duly investigate other public matters in connection therewith; and

Whereas under date of December 14, 1897, there was introduced in the United States Senate, by Senator Gorman, Senate bill No. 2778, having for its object to make an appropriation of money with which to properly improve the Severn River, in this State, and to construct a first-class naval dry dock thereon, at its head on Round Bay, capable of docking any of our ships of war of the maximum number of tons displacement; and in support of and to accompany his said bill he also submitted to the Senate the resolutions and memorial to Congress adopted by the city council of Annapolis, Md., adducing numerous valid reasons why Congress should at this time favorably consider all the matters so recited in said bill, and all of which, upon his motion, have since been printed as Senate Doc. No. 21, Fifty-fifth Congress, second session; and

Whereas the special requirements of a site for a Government dry dock, as formulated by the Navy Department, and as reported to the President of the United States by the Secretary of the Navy in his said annual report, will obtain, in a preeminent degree, at Round Bay, at the head of the Severn River, in this State, whenever said river shall have been improved, as contemplated in said Senate bill No. 2778, and which requirements are:

I. A situation upon a good harbor of sufficient size, depth, and accessibility for vessels of the largest size and heaviest draft;

II. A favorable position with respect to the principal lines of defense;

III. A local security from water attack, due to position and natural surroundings;

IV. Ample water frontage of sufficient depth and performance, and with currents of moderate rapidity;

V. A favorable position with respect to the lines of interior communication (by rail or otherwise) with the principal sources of supply;

VI. That the character of the ground shall be suitable for the construction of excavated docks and basins and for heavy structures;

VII. Proximity to centers of labor and supplies of material;

VIII. Healthiness of the climate and its suitability for outdoor labor;

IX. The existence in the vicinity of an ample supply of good potable water; and

Whereas the governor of this State, on January 24, 1898, transmitted to the honorable general assembly of Maryland a special message in writing in reference to this matter, reciting in terms both forcible and commendatory why, in view of its peculiar importance, action prompt and appropriate should be had in this matter, in order to secure the accomplishment of the desired object; and which message is as follows, to wit:

"STATE OF MARYLAND, EXECUTIVE DEPARTMENT,
"*Annapolis, January 24, 1898.*

"*To the honorable the General Assembly of Maryland.*

"GENTLEMEN: I beg leave to submit herewith resolutions passed by the city council of Annapolis relative to the desired action to be taken by the Representatives from Maryland in the Congress of the United States, looking to the establishment of a dry dock at Round Bay, on the Severn River, for the purpose of docking and repairing vessels of the United States Navy.

"The document accompanying this message shows fully the need of such a dock as is proposed and the advantages of the locality mentioned, and in suggesting action on the part of your bodies in this behalf I need only say that recently the United States Government has had to send one of its largest vessels to Nova Scotia to be

docked for the reason; that we had no dock accessibly located which was large enough for the purpose.

"I therefore suggest that a joint resolution be passed requesting Maryland's representatives in Congress to use their best efforts in this behalf, and in such resolution it might, in view of the great advantage which would accrue to our people, be proper to pledge for the State of Maryland the dedication of the necessary land to the United States Government for the purposes required.

"As will be seen by the accompanying document, a bill appropriating $1,500,000 for this purpose has already been introduced in the Senate of the United States by Senator Gorman, and I deem it of peculiar importance that your bodies should take prompt and appropriate steps looking to the accomplishment of the desired object.

"Respectfully submitted.

LLOYD LOWNDES, *Governor.*"

And,

Whereas all said matters so reported by the Secretary of the Navy to the President and by the President so reported to Congress, and so recited in said Senate resolution, Senate bill, and memorial, and in said special message of the governor of this State, are of the highest State and national importance, entitling them to the serious attention and immediate action of the general assembly of Maryland and of Congress; therefore

Be it resolved by the general assembly of Maryland, That the Senate and the House of Representatives of the United States of America, in Congress assembled, be, and they are hereby, respectfully requested to take immediate action in the matter of the said needed improvement of the Severn River, and of the establishment thereon of a national naval dry dock, as described and designated in said Senate bill No. 2778 and in said Senate Doc. No. 21, Fifty-fifth Congress, second session, and to this end that Congress, now in session, may make an appropriation of money adequate to the due completion of said improvement of said river, and of the construction of said national naval dry dock, as the same are recited in said Senate bill No. 2778 and in said Senate Doc. No. 21.

Be it further resolved, That the Senators and Representatives now in Congress from this State be, and they are hereby, respectfully requested to zealously urge upon their respective Houses the due importance of said national works, as recited in said Senate bill No. 2778, and in all proper ways to aid in securing, during the Fifty-fifth Congress, an appropriation of money adequate to the final completion of all thereof.

Be it still further resolved, That, in view of the great advantage which would accrue to our people, the general assembly of Maryland hereby pledges, for the State of Maryland, the dedication of the necessary land to the United States Government for the purposes required.

Be it still further resolved, That the secretary of state of this State be, and he is hereby, respectfully requested to transmit, under the seal of this State, a copy of these resolutions to each of the Senators and Representatives now in Congress from Maryland, with the request that they lay the same before their respective Houses for the information of Congress, and in support of the meritorious public measures recited in said Senate bill No. 2778, Fifty-fifth Congress, second session, the passage of which bill by this Congress is hereby respectfully and urgently requested by the general assembly of Maryland.

Given under our hands this 2d day of March, 1898.

LOUIS SCHAEFER,
Speaker of the House of Delegates.
J. WIRT RANDALL,
President of the Senate.

EXHIBIT NO. 6.

COURSE IN NAVAL CONSTRUCTION.

Important branch introduced this year at the Annapolis Academy.

Annapolis, Md., December 25.—The course of instruction laid out for the naval cadets who are studying naval construction No. 1 at the Naval Academy, the branch introduced at the beginning of the present academic year, is a broad and liberal one, going into every feature of the modern naval warship, with kindred information of a political and statistical nature bearing on the navies of nations and their constituent elements. The course will cover a period of three years.

In the first year there will be an introduction to the course, with general subjects, showing the importance of shipbuilding, and what part shipbuilding has played in the life of nations. The design of a ship, its method of construction, the skeleton,

the keel, the coverings of the warship, armor fittings, and supports, and every detail of the ship will be taken up.

In the second year there will be a brief review of the first year's work, the ship's design, features of shipyard procedure, comparative construction for different types of vessels, boats and anchors, and launching.

In the third year there will be a brief review of the whole field of work and an outline of the work of the third year. The ship's design will be then completed, which will be followed by comparative construction for different nations. This will include the interesting study of naval policies and estimates of naval strength. The materials of construction of vessels will be considered, corrosion and fouling, care and preservation, docks and docking, tonnage of vessels and gauging them, plant to build ships, estimates for building ships, administration and organization in Navy Department.

In the first year naval architecture is also taken up, including ship calculations, statical stability, dynamical stability, effect of the alteration of weights, floating derricks, docks, pontoons, and air bags, including experiment, use of model, docking, grounding, hauling up, and heaving down.

In the second year the course will also take in a review and outline of the coming work, the surfaces of buoyancy, flotation, and of slices. Also symmetrical, complimentary, and supplementary surfaces. Resistance in all its phases will be shown, and rolling in still water considered.

The third year will begin with review of work and outline of the year's work, the turning of the ship in all its motions and parts; propulsion of vessels will be investigated, together with vibration. The first year will also take up practical work in the drawing office, and will be continued each year of the course.

EXHIBIT NO. 7.

[S. 2528, Fifty-fifth Congress, second session.]

Mr. Hale introduced the following bill; which was read twice and referred to the Committee on Naval Affairs:

A BILL for the construction of dry docks at Portsmouth, New Hampshire; Boston, Massachusetts; Algiers, Louisiana; and Mare Island, California; for the enlargement and improvement of dry docks at Brooklyn, New York; at League Island, Pennsylvania, and Norfolk, Virginia; and for the construction of a wharf at Port Royal, South Carolina.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the Secretary of the Navy be, and he hereby is, authorized to enter into contract for the construction, after public advertisement, for naval purposes, of the following dry docks:

At the navy-yard, Portsmouth, New Hampshire, a concrete or stone dry dock about five hundred feet in length, the total cost of said dry dock not to exceed one million one hundred thousand dollars; and the sum of five hundred thousand dollars is hereby appropriated toward the commencement of said work.

At the navy-yard, Boston, Massachusetts, a concrete or stone dry dock, about seven hundred and fifty feet in length, the total cost of said dry dock not to exceed one million three hundred and fifty thousand dollars; and the sum of five hundred thousand dollars is hereby appropriated toward the commencement of said work.

At Algiers, Louisiana, a steel floating dry dock capable of lifting a vessel of fifteen thousand tons displacement and at least twenty-seven feet draft, the total cost of said dry dock, including moorings and wharf, not to exceed seven hundred and fifty thousand dollars; and the sum of five hundred thousand dollars is hereby appropriated toward the commencement of said work.

At the navy-yard, Mare Island, California, a concrete or stone dry dock about five hundred feet in length, the total cost of said dry dock not to exceed one million one hundred and fifty thousand dollars; and the sum of five hundred thousand dollars is hereby appropriated toward the commencement of said work: *Provided*, That no part of such appropriation shall become available until Congress shall have authorized the deepening of the channel in the approaches to said navy-yard, through San Pablo Bay, so as to admit vessels of twenty-eight feet draft, and the widening of said channel to a minimum of one thousand feet.

SEC. 2. That for the purposes of improving the dry-dock facilities for the use of the Navy, the enlargement of existing dry docks is authorized, as follows:

At the navy-yard, Brooklyn, New York, the fitting of timber dry dock number two with a concrete entrance, and the widening of such dock sufficiently to accommodate the largest vessels of the Navy, the total cost of such improvement and

SEC. 3. That the Secretary of the Navy may employ and pay out of the app
tions for dry docks authorized by this Act such additional expert aids, dra
writers, and copyists as may be necessary for the preparation of the plans and
cations therefor.

SEC. 4. That subject to the conditions hereinbefore set forth, the appropr
authorized by this Act are made immediately available.

EXHIBIT NO. 8.

[H. R. 4371, Fifty-fifth Congress, second session.]

Mr. Loudenslager introduced the following bill; which was referred to th
mittee on Naval Affairs and ordered to be printed.

A BILL for the construction of dry docks at Portsmouth, New Hampshire; Boston, Massac
Algiers, Louisiana, and Mare Island, California; for the enlargement and improvement of d
at Brooklyn, New York; at League Island, Pennsylvania, and Norfolk, Virginia; and
construction of a wharf at Port Royal, South Carolina.

Be it enacted by the Senate and House of Representatives of the United States of
in Congress assembled, That the Secretary of the Navy be, and he hereby is,
ized to enter into contract for the construction, after public advertisement, fo
purposes, of the following dry docks:

At the navy-yard, Portsmouth, New Hampshire, a concrete or stone dry doc
five hundred feet in length, the total cost of said dry dock not to exceed one
one hundred thousand dollars; and the sum of five hundred thousand do
hereby appropriated toward the commencement of said work.

At the navy-yard, Boston, Massachusetts, a concrete or stone dry dock abou
hundred and fifty feet in length, the total cost of said dry dock not to exce
million three hundred and fifty thousand dollars; and the sum of five h
thousand dollars is hereby appropriated toward the commencement of said w

At Algiers, Louisiana, a steel floating dry dock capable of lifting a vessel of
thousand tons displacement and at least twenty-seven feet draft, the total
said dry dock, including moorings and wharf, not to exceed seven hundred a
thousand dollars; and the sum of five hundred thousand dollars is hereby ap
ated toward the commencement of said work.

At the navy-yard, Mare Island, California, a concrete or stone dry dock ab
hundred feet in length, the total cost of said dry dock not to exceed one mill
hundred and fifty thousand dollars; and the sum of five hundred thousand
is hereby appropriated toward the commencement of said work: *Provided,* T
part of such appropriation shall become available until Congress shall have

accommodate the largest vessels of the Navy, the total cost of such improvement and enlargement not to exceed two hundred and eighty-six thousand five hundred and fifty-six dollars, which sum, or so much thereof as may be necessary, is hereby appropriated therefor.

At the navy-yard, Norfolk, Virginia, the lengthening of the granite dock one hundred and fifty feet, at a total cost not to exceed one hundred and sixty thousand dollars, which sum, or so much thereof as may be necessary, is hereby appropriated therefor.

At Port Royal, South Carolina, the construction of a wharf adjoining the timber dry dock, at a cost not to exceed seventy-five thousand dollars, which sum, or so much thereof as may be necessary, is hereby appropriated therefor.

SEC. 3. That the Secretary of the Navy may employ and pay, out of the appropriations for dry docks authorized by this Act, such additional expert aids, draftsmen, writers, and copyists as may be necessary for the preparation of the plans and specifications therefor.

SEC. 4. That, subject to the conditions hereinbefore set forth, the appropriations authorized by this Act are made immediately available.

EXHIBIT No. 9.

THE KEY TO WASHINGTON.

It will be remembered that after the attack on the Massachusetts regiment in Baltimore at the beginning of the war Gen. B. F. Butler was ordered to Washington. Instead of going through Baltimore he embarked his troops at Perryville, on the Susquehanna, and went thence to Annapolis, at the Naval Academy, which he made the base of his operations in reaching Washington. This movement was made in disregard of his orders, for by them he was directed to proceed to Washington through Baltimore. The reason General Butler came to adopt this route to the capital is a curious one, and he gives it in his book. He got the idea from reading two old political pamphlets, which few of this generation have ever heard of. It seems that Edmund Randolph, Washington's Attorney-General, wrote a pamphlet making a violent attack upon the President for his location of the Federal city. He charged that the location and plan of the city was the result of nepotism on the part of the President, who desired to give great value to the lands of his relatives, the Custises and Carrolls. He also declared there was no reason for the location, military or other, except a corrupt one.

A pamphlet in reply to Randolph was published, written as was supposed by Major L'Enfant, the French engineer who laid out the city and located the public buildings, and who was called in the old days when Washington had unpaved streets, "L'enfant terrible." L'Enfant declared that the port of Annapolis was the port and harbor of Washington, just as Havre was of Paris, and it was situated about the same distance from the capital as Havre was from Paris; that while the port of Annapolis was held the whole country would have access to Washington in a most certain and easy manner, especially for the conveyance of troops, as the great bays, Delaware and Chesapeake, were in precise and easy connection with it. Chesapeake Bay and Hampton Roads would protect the fleets of the world, and it was not thought desirable among military men, in looking at the defense of a capital, to have it situated close upon the shores of large open seas, where it would always be at the mercy of naval attacks and raids of troops by water. Great numbers of troops, Major L'Enfant said, could readily be brought down the Susquehanna River and landed on the bay and marched to the defense of Washington.

"I had read these pamplets in earlier days," said General Butler, "and now that I saw our means of access by railroad in the hands of hostile States, I at once put in mind the advantage of holding the port of Annapolis as the port and harbor of Washington."

The experience of General Butler showed that Major L'Enfant knew what he was writing about. The question is whether conditions have so changed in late years that his reasoning no longer applies. It is likely that that question should be answered in the negative, and that Annapolis still bears such a relation to the national capital as to make it good policy for the Federal Government to keep its hold there and increase its strength.

The above is an editorial from the Baltimore Sun of recent date. It exactly describes the relation which Annapolis bears to Washington, and is the strongest reason we have so far seen urged why the Naval Academy should remain at Annapolis and why the Government should still further increase its strength here. It is a reason which, properly urged upon Congress, should result in having a granite dry dock built at Round Bay, for which a bill has been introduced in the Senate by Senator Gorman.

EXHIBIT No. 10.

ROUND BAY DRY DOCK.

Dr. J. M. Worthington, of Annapolis, writes to The Sun as follows:

"Much has been said and written of late in regard to building dry docks for repair of our large ships of war, and, among other places, 'Round Bay,' or 'Ea Nest Bay,' as it was called in days of yore, when 'truth dwelt on the lips of men falsehood was a burning shame,' has been suggested.

"This has been ridiculed as a wild and impracticable scheme, and it may be duty to mention some facts brought to my notice several years since, and it ma the duty of the people of Maryland, who are all concerned as a matter of State p that our resources, natural and artificial, should be developed for the good of State and the good of the United States Government.

"Nearly a hundred years ago a canal was projected connecting Washington with the Chesapeake Bay through Round Bay. About 20 miles was needed. lay of the land was perfect, water was plentiful, and the only thing lacking wa energy of man to push the enterprise. A few days since it has been propose legislative action to connect Baltimore with Round Bay and the Severn Rive

"Several years ago some very prominent men and, I think, the New York He was interested, sent experts from one end of this country to the other to sel suitable place to build ships, and large ships, hoping and thinking that their e prise would succeed, and they would need a dry dock, and a large one, at the l expense possible. After a wide and thorough investigation it was determined t all things considered, Round Bay, head of Severn River, near Annapolis, near B more, with its vast facilities, and near Washington, the seat of government of great country, was the ideal place.

"A natural creek was found, which was thought could be converted at s expense into a dry dock. It has been urged that the locality is too far inland. a layman I may be pardoned for suggesting that when a ship is disabled and n repairs no open port and accessible harbor to the enemy's ships should be selec but just such a refuge as Eagles Nest Bay affords."

EXHIBIT No. 11.

CROWNSVILLE.

We hail with delight the prospects of the establishment of a national dry dock Round Bay. Although we cherish the greatest affection for this beautiful and p ductive inland lake, upon whose waters we have been wont to enjoy so many a ing, fishing, and ducking expeditions, we would gladly yield it up to our Governm for the great and worthy purpose of enhancing the interests of our ever-increas Navy. This magnificent body of water is situated on the Severn River, about 6 m above Annapolis, and seems to have been designed by nature for some great good purpose. Its peculiar position, lying as it does within 8 miles of the C peake Bay by water and within 2 miles of the same by a route over the land, re it of the easiest access and egress for ourselves, and at the same time afo greatest seclusion and safety from an enemy in the event of war. There m broad bosom our largest war ships could be docked, cleaned, and repaired un protection of but a small garrison of troops on the land and a single i stationed in the Annapolis harbor. Besides these, Round Bay possesses ma advantages which are worthy of consideration. The shores, which are all s hard, are peculiarly shaped upon the north and west sides. Coming directly north and running nearly a mile out in the bay is a point which has a width of 400 feet, with an elevation of 30 feet above the water, the ground solid and is now covered with timber. Upon this point, at a comparati cost, could be built one of the best tramways in the country. On the e this point and immediately at its base lies a creek with an area of fifte water, which is very deep, making it virtually a natural dry dock, as the the creek is only 12 feet wide and runs through a half acre of firm ground a into Round Bay at a point from which a plain view can be had of Annapo 8 miles away. On the west side of this long point and about half a mile d beautiful and fertile island which affords great shelter from the western western winds. The lands surrounding Round Bay are very fertile. The all that could be desired, and therefore, affording as it does the greatest fa

plenty, health, and happiness, we respectfully invite the honorable Secretary Navy to an examination of Round Bay and feel confident that he will pro- it the best site for the proposed Government dry dock.

EXHIBIT No. 12.

ROUND BAY DRY DOCK.

is the time for our citizens, in fact for all Maryland, to push the matter of lding of a Government dry dock at Round Bay, on the Severn. The Govern- eeds and must shortly have another dry dock on the Atlantic coast, and there reason that Maryland should have this great Government work, and Round peculiarly and specially adapted for all the purposes of a great naval dry That the matter of the building of a dry dock on the Atlantic coast is com- head is evidenced by the interview with Secretary of the Navy Long, pub- in Thursday's papers. The Secretary strongly advocates the building of a k on the Atlantic coast capable of accommodating the largest and heaviest f the Navy. There is no such dock, he declares, now on the Atlantic coast, need of one is urgent. He says that an immediate appropriation should be y Congress for the building of a first-class dock on the Atlantic coast, and proposes to use all the influence he has to secure such an appropriation. yland would have this great work, it is apparent that we must be up and else will the appropriation be made and some more enterprising and pushing nity capture this great work. Let us all work earnestly in this matter. It h our best efforts, and, besides, success promises to crown well-directed and ent effort.

EXHIBIT No. 13.

NEED FOR A STRONG NAVY.

tant Secretary Roosevelt, of the Navy Department, writes in Gunton's Mag- f the need of a strong navy by the United States. In the course of his argu- e says:

e of the penalties of desiring to speak one's mind is that the man so speaking t be ready to back up his words by acts, unless he is willing to find himself in a arly humiliating position. This applies just as much to a nation as to an indi- l. Therefore, if a nation desires any weight in foreign policy of any kind— , even if it desires only a guarantee that no foreign nation will adopt towards stile policy—then it must possess the means to make its words good by deeds. case of a nation whose interests in foreign affairs are concerned primarily with s touching it by land, this means that it must be ready to face invasion by or, in case of necessity, itself to invade by land. If, as in the case of the d States, there is no great military empire abutting on the country in question, t must look primarily to its Navy as the means for carrying out any policy on it has resolved. The United States has on one side Mexico, on the other Can- Canada, it is true, is part of one of the greatest empires in the world; but the Empire, though it has ever been fertile in able generals and gallant soldiers, eless owes its high standing primarily to its navy; and in the very unlikely f any trouble between England and the United States, the British forces in and the American Navy on the ocean would be almost equally at a disadvan- Aside from Great Britain, however, practically every other nation which any possibility have trouble with us would have to meet us at sea. This, e, means that if the United States is to have any foreign policy whatsoever possess a thoroughly efficient navy."

is no gainsaying this. It means simply that a law without executive power t is of no value; a policy without ability to enforce it is a farce. No one this Government to plunge so largely into expenditure as to cripple the of the nation's strong box, nor does anyone believe that there is great need erful navy to preserve the integrity of the Union at home.

tions are more and more coming into touch. The advance of the century l lines of trade communication and transportation brings the powers of the er together and creates friction. Such friction is calculated to produce ments, and on the part of some to stimulate greed and conquest, likewise to intermeddling.

So, too, this closeness of the nations of the world to each other augments the obligations of each to protect each its own citizens or subjects abroad, and to maintain their rights in trade, travel, and exchange of commodities.

The power that can make the effort to afford this protection by use of words only is at a fearful disadvantage. The power that has the physical ability to command respect for its decrees receives it from all sides. We are not as yet able to command that respect. Beaten in diplomacy, as a rule, we have only our homely common sense and high regard for human rights as weapons of defense. But these, however eloquently and defiantly voiced, are valueless unless we can back them up with a threat of force, as the cases demand when they arise.

EXHIBIT No. 14.

OUR JINGOES WANT NO FORTS.

The remarkable spectacle was presented in the House of Representatives on Saturday last of jingo Democrats uniting with jingo Republicans to vote down appropriations in preparation for the numerous wars they have but recently been inviting. Not that the wars or preparations for them are absolutely necessary, but it is surprising to find our warriors so inconsistent. One would expect from their bellicose utterances that they would be the first to wish to put the country in a posture of defense—to equip it with the largest possible outfit of forts, ships, and guns. In view of the exposed and defenseless condition of our coast cities, sensible jingoes would cut down the pension waste and lessen salaries right and left, so as to be in funds for a struggle with Spain, England, or any other power that knocks the chip off the national hat, but to everybody's surprise they voted last Saturday to cut down the estimates of the War Department from $13,378,571 to $4,144,912. The fortifications bill, as passed by the House, carries the last-mentioned sum and no more, all proposals to increase the appropriation being ruthlessly voted down.

The reason for the economical spirit displayed by the Republican majority is plain enough. The deficit of over $50,000,000 during the present fiscal year compels a merciless criticism of all appropriations—except pensions. Even the pension bill is made to carry less than the estimated outgo for pensions, reliance being placed on a deficiency bill at the next session of Congress. A record of economy is also desirable for the dominant party just now, in view of the approaching Congressional elections. It will be a feather in the party's cap if it can point to a balancing of revenue and expenditure, effected by old-fashioned economy, however injudiciously applied. The taxpayer, groaning under his burden, is not particular as to the items removed from it, provided the total weight is materially reduced. Yet he has his preferences. He would, perhaps, say that our pension bill affords a better field for reform than our fortifications. There are various other bills that could be trimmed to better advantage. Under the stimulus of a surplus and the policy of spending much, so as to seem to require a high tariff, nearly all the appropriation bills some years ago assumed a bloated appearance. "This is a billion-dollar country," said the apologists of extravagance. But several years of business stagnation and hard times have modified the "billion-dollar" sentiment. The country is tired of seeing appropriations exceed revenue by scores of millions, and will welcome a general scaling down of expenditures. Nothing is more odious to the average politician than a "cheeseparing policy," but the public rejoices to see him forced to recognize its merits.

One of the ideas expressed in the course of the debate illustrates the imperfect information—not to say ignorance—of some of our jingoes as respects the power of modern battle ships and our need of coast defenses. A leading Democrat declared that we do not need strong coast defenses, for the reason that "no battle ship built in Europe can cross the Atlantic Ocean." The statement is preposterous. A Japanese cruiser has just been launched in England which can go 12,000 miles without renewing her coal supply. There are many scores of warships in Europe's navies that can do nearly as well. Among the number may be reckoned the British vessels *Powerful* and *Terrible*, each of over 14,000 tons, which can cross to this side of the Atlantic and return without coaling. These ships are thoroughly seaworthy and can go anywhere, outranking all vessels of their class. If the reference was to the modern battle ship, strictly so called, still it was erroneous. There are several dozens in the British navy alone that can cross the Atlantic, and, as regards coal, it can be had, if necessary, at Halifax or Bermuda for the return trip, or for operations along our coast. If the recklessness of our Congressional jingoes in foreign affairs is due to the belief that we are not open to naval attack on account of the breadth of the Atlantic, they will do well to get rid of it as soon as possible. We have at this moment many billions of property in our coast cities at the mercy of foreign

fleets. With a rational and conciliatory foreign policy we may avoid the danger of attack and render forts and guns along our coasts useless, but we can not cherish a policy of bravado and also expect peace. We can not eat our cake and have it. We must make up our minds to one policy or the other—to conciliation, with slow progress in fort building, or aggressiveness, with its sequel of vast expenditure in preparation for the wars we invite.

EXHIBIT No. 15.

THE NAVY NEEDS DOCKS.

Mr. Long says it would be bad for our ships if war should break out.—Battle ships must suffer.—No place to repair them in case they were injured.—There is not a dock on the Atlantic seaboard to which they can be taken, and docking in foreign ports is not only expensive, but it is also humiliating to have to ask the favor.

Washington, February 9.—Secretary Long to-day spoke with much feeling of the deplorable condition of the Navy in its lack of proper dry-dock facilities and the dangers that would arise should the nation unexpectedly be forced into war. Dry docks are regarded by the Secretary as more important to the Navy now than battle ships, and if Congress can not authorize both this session the Secretary will use all the influence he has in favor of at least one first-class dock, to be located somewhere on the Atlantic coast, capable of accommodating the heaviest ships building for the Navy.

"We have not to-day on the Atlantic seaboard," said the Secretary, "a single dock in which our battle ships can be taken, and until a dock of ample sufficiency is constructed these big ships must either be sent to some foreign dock for repairs or else continue cruising, with the danger of serious injury to their bottoms through want of attention. The Port Royal dock is a failure from beginning to end. No battle ship can be placed in it without danger to the ship and the possibility of the dock collapsing. Besides, the dock is inaccessible owing to lack of proper water facilities. The dock at New York may be repaired so that it can take in vessels, but any day some discovery may be made which will show the utter worthlessness of this basin, too.

"MUST BE SENT TO HALIFAX.

"These docks are the only ones which would take in the battle ships, and neither is capable of accommodating them. Even if it is found advisable to repair the New York dock, four months or more will be required to finish the work. Meanwhile the *Massachusetts* and *Iowa* require overhauling, and there is not a place to send them except Halifax. Docking in foreign ports is not only expensive, but it is humiliating to our pride to have to ask the favor.

"I have urged in my annual reports and in other communications that at least one dock be constructed on the Atlantic coast. I believe it more important that we have this dock than that a battle ship be provided, although I hope to secure both. A battle ship will cost nearly $5,000,000, while we can build a dry dock for $700,000, and if Congress fails to provide the ship, it certainly seems that proper protection of those we now have call for an immediate appropriation for a dock.

"We would be in an unfortunate plight if the country went to war with the present lack of docks. However slight the injury a battle ship might suffer, the use of this vessel might be entirely lost, owing to the absence of a single dock in which she could be quickly placed and repaired."

MR. MALSTER AT THE NAVY DEPARTMENT.

Mayor Malster was in the city to-day upon business with the Navy Department in connection with repairs to the torpedo boat *Winslow*, injured in collision with a tugboat some weeks ago. Several plates of the little craft were smashed in, and the president of the Columbian Iron works has been unable to find a firm willing to make so small a delivery. He has asked a number of companies that manufacture steel plates, such as are required for the *Winslow*, but none care to take an order for so few. The mayor has asked the Navy Department for advice, and an arrangement will probably be made with the Bath company whereby that firm will let Mr. Malster have some of the plates intended for boats building at the Maine yard.

After settling the torpedo-boat business, the mayor visited the White House, where he saw the President for a few minutes. The mayor said that he had merely paid his respects and that the call was of no significance whatever.

EXHIBIT No. 16.

THE PROPOSED DRY DOCK NEAR ANNAPOLIS.

A few years ago the revenues of the Federal Government were far in excess of the amount required and an enormous surplus had accumulated in the Treasury. It is to be regretted that Senator Gorman did not at that time, or at some time earlier in his long career in the Senate, bring forward some such measure as that for the establishment of a dry dock and shipyard near Annapolis which he introduced this week. The bill for the appropriation of a million and a half dollars for a great Government work at Round Bay, on the Severn River, has substantial merit. All the dry docks suggested by the Secretary of the Navy in his recent annual report are proposed to be placed near the open sea and within easy reach of any superior naval force. Annapolis, as we pointed out the other day, is the seaport of the National Capital and the key which commands access to it, as was shown by General Butler in the early part of the civil war. Round Bay, where Senator Gorman proposes to locate a dry dock, is landlocked and absolutely inaccessible to any hostile vessel. It is only a few miles from Annapolis, and naval works there could be used to advantage in the instruction of cadets in the Naval Academy, besides being less than 2[illegible] miles from the District of Columbia.

It is strange that the defense of Washington has from the beginning been neglected—indeed, scarcely considered. It fell an easy prey to the British in 1814. If General Beauregard had been permitted to march on it in 1861, after Bull Run, there was nothing to prevent him. If General Lee had routed McClellan at Antietam he would have met no further obstacle in his march on Washington. To-day Washington is, perhaps, as defenseless against any sudden invasion as it was in 1814. Even if the batteries at Sheridans Point and at the approaches to Baltimore were completed the Government has no trained artillerymen to man the guns.

In a recent article Gen. George W. Wingate declares that the entire artillery force of the United States will not provide half enough men to man the present fortifications around New York alone. The great guns which are being placed in the new coast defenses, he continues, are as valueless as so many logs of wood. There are no gunners to use them, and he goes on to show that artillerymen can not be improvised, but must be carefully trained. To establish a great naval station, which will at once protect the national capital and command our greatest and most important inland water, is a proposition well worthy of the consideration of the Congress.

EXHIBIT No. 17.

MANY VESSELS ARE LOST.

The Massachusetts coast is lined with wrecks—Sailors die in the storm—Great havoc is wrought to the shipping interests—Twelve bodies come ashore at Magnolia Beach and six at Lynn—The loss of life at least forty.

Boston, February 2.—From the latest advices obtainable it is believed that at least forty sailors lost their lives in the late storm on the Massachusetts coast alone.

More than a score of vessels were wrecked and as many more badly damaged.

The loss around Cape Ann is estimated at not less than twenty.

Six vessels went ashore at Pigeon Cove and Rockport, and it will be seen that the loss was even worse than that of 1839.

There have been thirty-two bodies washed ashore from the wrecks at the present writing, and many more will probably be found to-morrow.

The greatest damage was at Gloucester, where about thirty vessels went ashore, the whole shore of the harbor being lined with craft; some of them lying singly, others piled together. Fourteen bodies have been picked up, and some of these are supposed to be the crew of a schooner which Monday afternoon was anchored off Houghs Neck, in the outer harbor. At anchor also before the storm were the three-master *J. W. Jewett*, the coasting schooner *Clara Jane*, the *James Holmes*, and another small coaster. All of these have disappeared, and have without doubt gone to the bottom or been dashed on the rocks, and of all their crews only the five men of the *Jewett* have been saved.

At Magnolia Beach to-day twelve bodies were picked up, and at Lynn Beach six came ashore this forenoon. These last were from the crew of the schooner *Charles A. Briggs*, wrecked on Nahant Rocks Monday night.

Pilot Perkins arrived at Salem this morning from Bakers Island and reported that

twelve bodies had been picked up by small boats off Magnolia and taken to the island, and these are undoubtedly a part of all of the four unaccounted-for vessels.

At Rockport the storm made a clean sweep of the vessels in the harbor, driving them upon the beach and tearing them to pieces.

The following is a complete list, so far as obtainable at a late hour to-night, of the schooners ashore on Cape Ann and vicinity which were totally wrecked or badly damaged:

Three-masted schooner *J. W. Jewett*, of Portland; crew saved.

Coasting schooner, supposed to be the *Clara Jane*, of Calais, Me., went ashore on Camp Comfort Point; all hands supposed to be lost.

Coasting schooner, supposed to be the *James Holmes*, of Belfast, Me., went ashore at Dolliver's Neck; all hands supposed to be lost.

Schooner *Hattie M. Graham* went ashore at Rocky Neck; got off leaking.

Schooner *Lawrence A. Munroe*, ashore at Rocky Neck and slightly damaged.

Schooner *John McKeen*, of Boston, fast ashore at Rocky Neck; bowsprit and main boom gone.

Schooner *Lizzie Griffin* drifted out of the harbor and went ashore on Black Bess.

Schooner *Sea Fox*, of Provincetown, ashore on Ten Pound Island.

Sloop *Riverside*, of Rockport, ashore on Rocky Neck.

Sloop *Mary A. White*, of Rockport, sunk; probably a total loss.

Sloop *Ida May*, of Rockport, ashore high and dry at Ten Pound Island; probably total loss.

Yacht *Jumbo* sunk at Freshwater Cove.

Nine small fishing boats ashore at East Gloucester, most of which will probably be floated.

In addition to these craft the schooners *Hazel Oneita*, *Edgar Foster*, of Bucksport; *Unique*, of Boston; *Sarah E. Nightingale*, of Eastport; *Vesta*, *Martha A. Bradley*, *Electa A. Eaton*, and *Nereid* were all towed from dangerous positions by a tug.

The steam lighter *Frank Scripture* was sunk in Pigeon Cove Harbor, and is a total loss. The *Scripture* was valued at $20,000; not insured.

The schooner *George R. Bradford* is ashore and gone to pieces in Pigeon Cove Harbor; valued at $12,000; insured.

Sloop *Daniel Webster* drifted ashore and went to pieces in Pigeon Cove Harbor; three of the crew were drowned.

Schooner *Baracoat* went ashore, and has gone to pieces in Pigeon Cove Harbor.

Sloop *Charley Steadman* went ashore in Pigeon Cove Harbor; may go to pieces.

Schooners *Defiance* and *Aquopimoqul* went ashore in Pigeon Cove Harbor; badly damaged.

The coasting schooner *Marcellus* was in Gloucester Harbor at anchor when the storm arose, and after the gale could not be found. It is thought that she may be the unknown vessel which is ashore with the others at Dollivers Neck.

On Tuesday various articles of ladies' wearing apparel were found floating on the water along the shore of Dollivers Neck, where it is supposed at least three vessels went down. This seems to show that there must have been women on board the ill-fated craft, and that they shared the fate of the crews.

Three fishing vessels broke from their moorings at Beverly, and were driven ashore Monday night.

About a dozen vessels went ashore in Salem Harbor, but none were totally wrecked and no lives were lost.

The shore to the south of Boston fared better than the north shore, though at Chatham every small boat in the mill pond and Stage Harbor were sunk or went to pieces on the shore.

At Plymouth two vessels went ashore. An unknown vessel, probably a Gloucester fisherman, is ashore on the back of Plymouth Beach and is going to pieces.

No casualties or serious wrecks were reported at Vineyard Haven, though two men on a wrecking scow have not been heard from.

BOSTON'S GREAT LOSS.

The blizzard damaged its business interests $600,000.

Boston, February 2.—This city is rapidly recovering from the effects of the fierce snowstorm which swooped down upon it on Monday afternoon, and the principal avenues of traffic were reopened to public use to-day. Large forces of men have been at work night and day upon the street, clearing away the heavy fall of snow which was piled in hugh drifts at some of the most important points. Both the city authorities and street railroad officials worked together to restore the streets to their normal condition as rapidly as possible.

A large part of the city is in darkness again to-night, as it is not deemed safe to turn on the electric current, except in that district served by underground wires.

The Boston Elevated Railway Company employed 7,000 men, 250 plows, 400 snow

sleds and 500 extra carts to cope with the storm. Besides this large force th were hundreds of linemen to repair the broken wires which lie strewn upon ev street through which the cars run.

General Bancroft, manager of the company, announces to-night that his road now practically cleared, except in some of the suburban towns. It is estimated General Bancroft that his company alone will lose $250,000 by the damage to its pr erty and the extra cost of clearing the tracks. It cost the city $75,000 to clear streets.

The suburban resident, who was snowed in at his home yesterday, managed to to town this morning after about two hours' delay on the trains. Serious break the wires rendered it impossible to run the trains on time.

All roads began moving freight cars to-day, hundreds of which had been sta on the tracks. A great amount of perishable freight was on board some of the tra No through passenger trains for New York left Boston on time, but were dela from one to two hours east of New London and Springfield.

The telegraph and telephone companies have been among the worst sufferer the storm, since their lines are down in all directions. The Boston Telegraph C pany established a through wire to New York this afternoon. The Western Ur did not get a direct New York wire until to-night. Reliable estimates place the to the Western Union at $20,000 and to the Postal $10,000. The Long Dista Telephone Company places its loss at $15,000. Business interests in general, i estimated, have sustained a loss of about $600,000.

Reports from neighboring cities indicate that the storm visited the surround country with equal severity. Salem experienced a blizzard. The wind there b in a terrific gale and did great damage. So great was the danger from live w that the mayor at 1 a. m. yesterday ordered power shut off and cars were left sta ing on the streets. Lynn was in total darkness after 10 o'clock Monday night, estimates of the loss to property in that city put the sum at $25,000. The storm dealt fiercely with Lawrence.

Four hundred passengers spent Monday night in two Boston and Maine trains Portsmouth, N. H. One had ploughed to within a mile of the depot, when the eng gave out. The other gave up the struggle. The passengers were without food eighteen hours. Many of them were women and children, and their sufferings w great.

Throughout New Hampshire the snow fell for thirty hours. The wind and bi cold weather made the storm more severe.

In Vermont the snowfall was 5 feet on a level in some places.

EXHIBIT No. 18.

TROUBLE CAUSED BY ICE.

It extends from Thomas Point to Fort Carroll and interferes with the movement sailing vessels.

Steamers which arrived in port yesterday reported ice in the bay from Tho Point, below Annapolis, as far up as Fort Carroll. All reported it light, but w sailing vessels started to sea it was found to be about 1 inch thick in the vicinit Fort Carroll.

Stewart's barkentine *Good News*, Captain Myrick, in tow of the tug *Rescue*, sta for Rio Janeiro about noon yesterday. When Fort Carroll was passed it was covered that the thin skins of ice were eating into the wooden bow of the ship, in a very short while the paint was as cleanly taken off as if it had never b placed on her. Captain Myrick decided not to risk a passage through the field o ahead of him and ordered the tug to return to port. The *Good News* anchored in harbor and a quantity of lumber was sent for to sheath the bow. It is expecte have her ready to sail this morning.

The schooner *Howard Russell*, which left for the Rappahannock to load, stopped by the ice and came back, and a large fleet of bay vessels loaded and re to sail are remaining in port. The threatened ice blockade was reported to the bor board, which at once gave orders for the ice boats to go into commission to Capt. Richard Dunn, of the *Annapolis*, and Capt. Thomas Lewis, of the *F. C. Lat* were ready last night to leave for service. Both boats will go down the river break up the most threatening ice fields.

The southerly wind and flood tide yesterday afternoon brought large quantiti ice into the harbor, which jammed on the east side. The chilly air soon knitted pieces together, and only the traffic through it prevented it from becoming trou some.

The German steamer *Romulus*, which tried to reach port on Tuesday evening, but was blown back by the high winds, eventually went ashore on the east side of the channel between Fort Carroll and Sparrows Point. The tug *Chicago* was waiting upon her up to last evening, but could not float her. The tide was not sufficient to raise her from the ground.

The Merchants and Miners' steamer *Gloucester* remains in the same careened position on Booz Brothers' railway into which she dropped Tuesday morning by the unusual lowering of the tide.

Exhibit No. 19.

STEAMER PRATT DISABLED.

She broke her shaft in the bay and was towed back to port—Passengers transferred to the *Joppa*.

The steamer *Enoch Pratt*, of the Baltimore, Chesapeake and Atlantic Railway Company, was towed into her dock at Light street wharf yesterday afternoon with her shaft broken.

The *Pratt* left Baltimore last Monday afternoon for the Choptank River in place of the *Avalon*. When about 15 miles down the bay, while she was battling with the storm, her shaft broke and she began to drift before the wind. Her anchors were thrown out and the vessel was stopped a short distance from a sand bar.

The company was notified, and the tug *Peerless* was sent to the assistance of the *Pratt*, but heavy weather prevented her from reaching the disabled steamer, and she put into Annapolis for the night. When the failure of the tug to reach the *Pratt* was learned in Baltimore, the *Joppa* was sent to the scene, and after considerable difficulty the passengers were transferred to the *Joppa* and brought back to Baltimore. Later in the night the *Joppa* went down the bay, taking the *Pratt's* passengers to their destinations.

Yesterday the *Peerless* succeeded in making fast to the *Pratt*, and she was towed back to Baltimore. Her freight was transferred to the *Cambridge*.

Exhibit No. 20.

STEAMERS DELAYED.

Ice in the river and bay continues to interfere with the passage of many craft.

Heavy ice in the bay and its tributaries was reported by the bay steamers and other vessels arriving at Baltimore yesterday. A light southwest wind carried much of the ice out of the channels and against the eastern shore of the bay and river.

The ice boats *Latrobe* and *Annapolis* went into commission and made short work of the ice that had formed in the river channels. Then the *Annapolis* patrolled between Seven Foot Knoll and Annapolis, which will be kept up by Captain Dunn as long as there is any tendency of an embargo. The *Latrobe*, Captain Lewis, went to the upper bay to be of service to the Ericsson boats, which were said to be detained there by the ice.

Several of the bay steamers were very late in arriving. The steamer *Ericsson*, due at 7 a. m. from Philadelphia, got in at 10 p. m. The *B. S. Ford*, which makes connection with the Queen Anne's Railroad at Queenstown, was unable to make her return trip last night after arriving in the city all right. The Baltimore, Chesapeake and Atlantic steamer for Snow Hill was unable to get farther than Crisfield, and may not be able to do so for several days, according to a special dispatch from Pocomoke City. The steamer *Corsica* was compelled to tie up at Centerville.

It was learned that the lock in the Chesapeake and Delaware Canal at St. Georges, 4 miles from Delaware City, had been broken, and that from four to six days will be required to repair it. The Ericsson Line will not, therefore, send out any of its steamers until Monday or Tuesday. The Clyde Line steamer *Defiance*, which intended to go through the canal to Philadelphia from Washington, came into Baltimore harbor and berthed at the York River Line pier, Light street, to await favorable reports.

The city tug *Baltimore*, Captain Fooks, cut out several tows of oyster boats which were stuck in the ice below Fort Carroll. The barkentine *Good News*, bound to Rio Janeiro, which returned to port Wednesday after having met ice in the channel, was

sheathed in time to leave early yesterday morning. The German ship *Romulus*, which was blown ashore off Sparrows Point Tuesday evening, was floated yesterday and docked at Miller's wharves.

EXHIBIT NO. 21.

ICE CONDITIONS.

Yesterday there was but little ice from Fort McHenry up to Light street wharves. Pilots report heavy ice between Sharps Island and Poplar Island. Captain Lewis, of the ice boat *F. C. Latrobe*, conveyed the schooner *Jennie S. Butler* and steamer *Finland* from Sandy Point up to clear water in the river. He reports the ice drifting from Sandy Point to Fort Carroll under the action of the wind and tide, which yesterday were very mild. The *Annapolis*, Captain Dunn, was out yesterday and went below Annapolis to assist oyster tows or any vessels in distress.

AGROUND IN THE DELAWARE.

Philadelphia, February 6.—The American Line steamship *Pennland*, which sailed from this city yesterday for Liverpool with a general cargo, valued at $150,000, ran aground late yesterday in the shoals below Chester. At high water to-day she was still hard and fast. Two of the city ice boats attempted to move her this afternoon, without success. Her position is not dangerous, and, should she fail to float at midnight, it is thought it will be necessary to lighten her cargo.

EXHIBIT NO. 22.

THE LATE FREEZE.

The damage it entailed on the oyster interests—Kent County as a sample.

Chestertown, Md., February 7.—Few persons appreciate what a protracted freeze means to the oyster counties of the Chesapeake. There are to-day held fast in the ice in Kent County 500 boats. Putting the daily earnings of these boats at the minimum of $3 per day, when it is possible for the men to reach the bars, it will be found that each day of an ice blockade means a loss of between $1,500 and $2,000. This, multiplied by the number of counties of the State having large oyster interests, many of their interests far greater than Kent, it will be seen that 10-degree weather is anything but a pleasant climatic condition from the standpoint of this large element of our citizens.

In addition to enforced idleness on the part of the workmen, considerable damage often results to boats and other property. A prominent citizen of Rock Hall said yesterday: "This cold spell means a direct daily loss of $1,000 to our village. Three hundred oystering boats are now frozen in our harbors, and every day the streets present a scene of Sunday inactivity." It will be seen that cold weather produces conditions of a serious nature in the bay-shore counties of the Chesapeake.

Kent has but one eligible to membership in the Order of the Crown by virtue of direct descent from royalty in Europe. Mrs. John W. Bordley, of Chestertown, is a daughter of Mrs. Alfred Merritt, who was a Miss Claypoole and sister of Mrs. Isaac Freeman Rasin, of Baltimore.

The male students of Washington College have completed arrangements for the publication of a college monthly with the following corps of editors: Editor-in-chief, L. A. Davis; business manager, W. L. Wheatley; literary editor, T. Allen Goldsborough; athletic editor, Ernest Cruikshank; religious editor, W. E. Poole; social editor, Miss Lottie Woodall; humorous editor, J. S. E. Pardee; poet, Poole.

EXHIBIT NO. 23.

[Special dispatch to the Baltimore Sun.]

Annapolis, Md., February 7.—The iceboats *Latrobe* and *Annapolis* are tied up at the wharf to-night, and several tugs are here ready to proceed with tows to-morrow. Ice 4 and 5 inches thick was met between Seven-Foot Knoll and Sandy Point.

EXHIBIT NO. 24.

Off Eastport, or Horn Point Bar, which is opposite to Annapolis, ice has formed 5 or 6 inches thick. About 50 sea gulls in search of food were on these ice packs this morning, and a large flock of canvas-back ducks tempted sportsmen, who hurried for their guns.

EXHIBIT NO. 25.

DREDGING THE CHANNEL.

Three and a half million cubic yards have been taken out during the year.

Dredging in the channel will soon have to be stopped on account of ice interfering with the marks for the dredgers. During the year just ended about 3,500,000 cubic yards were dredged from the channel and dumped into the bay.

Five dredges have been in operation until recently, when two were put out of service temporarily. Of these four were of the clam-shell pattern and one the endless bucket variety. The latter was adopted to excavate hard matter in the cut-off and Fort McHenry channels, which could not be otherwise dug out. Three of the dredges were worked day and night with double crews. Those remaining in action are working in the Fort McHenry channel.

The Virginia Dredging Company has the contract for removing 5,000,000 cubic yards before July 1. As the company has progressed so well, it is thought by the Engineer Department that the contract will be completed on time. An appropriation of $400,000 was made available for the work. With this amount it is estimated the channel may be dredged to a depth of 30 feet for a width of 230 feet throughout its length. An additional appropriation is needed to increase the width of the deep channel, and for this purpose Col. Peter C. Hains, who has the matter in charge, made an application for $800,000.

During Colonel Hains's absence as a member of the Nicaragua Canal Commission the work in Baltimore is in charge of Lieut. C. W. Kutz.

EXHIBIT NO. 26.

DRY DOCKS.

How the great problem may be solved—Many interests involved—New England's prospects hampered.

Washington, February 6.—The dry-dock matter seems to move slowly. The trouble is that this question is such a many-aided one that the Committee on Naval Affairs hardly know which way to turn to settle it satisfactorily to the multitudinous interests involved.

Where the hitch comes is just here. Everybody realizes that the present increase of the Navy, in the number of large vessels being built, will require a larger type of dry docks than now exist in the various parts of the country, and so Senators and Representatives from the various sections are up and doing in their endeavors to get additional dry-dock facilities for their own communities.

Mr. Barrett and the other members of the Massachusetts delegation are particularly urgent in their presentations of the claims of the Charlestown yard, Mr. Barrett particularly so because the yard is nearly all in his district. The New Hampshire delegation are leaving no stone unturned in behalf of the Kittery yard. This attitude hampers New England's prospects anyway, with two sections clamoring for recognition, although Governor Long has suggested a happy settlement of this difficulty by accommodating both Charlestown and Kittery by giving both additional dry-dock facilities, which will doubtless be the ultimate outcome.

And then the New York delegation comes up smiling and states that the metropolis needs better docking apparatus than it has now, while the friends of Norfolk, Newport News, Port Royal, New Orleans, Mare Island, New London, Conn., Tortugas, San Francisco Bay, San Pedro, and even Alaska, are not at all backward in coming forward with the claims of their respective localities for new and modern dry docks.

And so the question becomes a grave one in many ways, particularly from an economical standpoint, although it is short-sighted economy to refuse to build large

dry docks to accommodate the new battle ships and cruisers, which must go to ruin if not overhauled on their bottoms about so often. And yet the question is, Can the Government just now afford to expend the millions which will be required to put the docking facilities of the country in A1 shape?

That is what is puzzling the Naval Committee. It is at work on the naval appropriation bill now, and I hear that there is a general understanding among its members that it will leave out the whole proposition of dry docks from the regular appropriation bill, so not to hamper its passage through Congress. Then later on it may bring in a bill covering the dry-dock matter as a separate measure, and thus give every section a chance.

By inserting in the regular bill provision for a dry dock at Boston, for instance, where it is imperatively needed, and leaving New York out in the cold, the delegation from the Empire State would immediately fight the whole appropriation bill if Boston seemed in a fair way to get a new dry dock and New York did not. And so it is very likely that the whole subject will be studiously avoided in the regular bill, but will come in on a separate measure later on, providing the subcommittee on dry docks decides that this is the best solution of the matter.

There are some members of the whole committee, however, that believe the topic is of such importance that it ought to be in the regular bill. In that event a lump-sum appropriation would be made under the head of "ordnance and navy-yards." Chairman Boutelle of Maine, however, is understood to favor holding the whole matter of dry docks in abeyance until the regular bill is disposed of. He is of course interested in Kittery's project, and will, with Speaker Reed, Chairman Dingley, and others whose influence is admittedly very potent in these matters, do all he can for Maine's yard. Senator Hale of Maine is chairman of the committee in the Senate, which puts Kittery in a commanding position, as will be readily seen.

To offset this, however, we have Governor Long, Secretary of the Navy, on our side, which, so far as influence goes, makes this phase of the question about even at present. It seems to be with Boston and Kittery a case of nip and tuck, and a little in favor of nip. The final result will be that both will receive additional facilities. Just when nobody can tell until the atmosphere here clears a bit.

The recent report made by Commodore Bunce, U. S. N., on this subject is of interest. He touches upon all the docks of the country and makes various recommendations for their enlargement and development. In this regard it is perhaps worthy of note that he says nothing about Kittery, which is suggestive at least.

For Boston he recommends the construction of one concrete graving dock, length available for docking, 750 feet, and 90 feet wide, with a depth of 30 feet. A channel of equal depth with the dock should be dredged out to permit vessels to enter, but this would, of course, be a comparatively easy matter with the dry dock a stern reality in itself.

If the Government would not do it, the business men of Boston would doubtless be very glad to pay the bills for the interest they would receive in the general activity which would as a result pervade the navy-yard at Charlestown.

Just think of it. This country has a total of eleven dry docks, only one of which, that at Puget Sound, Wash., can take our battle ships. In other words, all of our big vessels to be docked have got to go clear up to Washington to be accommodated. Argument on this line is therefore unnecessary. It must be painfully apparent to all that the sooner we have adequate docking facilities in other sections of the country the better it will be.

There will doubtless be an attempt made in the House to have the naval bill amended with dry-dock appropriations, providing the committee decides to ignore them in the regular bill. All such moves will be subject to a point of order that such authorization of the expenditure of the public money will be new legislation, and therefore not in order on an appropriation bill. This point will be doubtless sustained, as it always is. This rule is generally known as the Holman rule, adopted as the result of the persistent economizing efforts of the "great objector," now dead and gone.

Mr. Barrett has proposed an amendment to the rules in this regard. When they come up in the House it will be thoroughly discussed. If they come up before the naval bill comes in and the rules are changed, then it will be possible to get dry-dock appropriations on the bill, but if the House adheres to the rules as at present drafted, then all these dry-dock improvements will be sand-bagged with the point of order.

This is the situation as regards dry-dock facilities just now. Every effort is being made for Boston that is possible, but the parliamentary road which the idea has got to travel is apt to prove a weary pilgrimage. All of these matters are necessarily slow in reaching the desired terminus, but some time or other the desired result is generally accomplished.

ATHERTON.

EXHIBIT No. 27.

NO DRY DOCKS.

The bill practically dead in committee for the year.—Its only hope is a change in the rules of the House.

Washington, February 10.—The dispatch I sent you some days ago in regard to the dry-dock problem was not any too gloomy, although some people have written to me, evidently thinking that such was the fact.

In the House Naval Committee, which is going to report the naval appropriation bill, no discussion has been had on the dry-dock question. It has been referred to a subcommittee. That subcommittee has not reported. When it does report the majority will favor dry docks. Then the matter goes to the Appropriation Committee, of which Mr. Boutelle, of Maine, is chairman, and he is known to be opposed, in common with all his colleagues from that State, to any dry-dock appropriation this year.

Unless the rules of the House can be changed, or a special order obtained from the Committee on Rules, of which Speaker Reed is chairman, allowing an appropriation for dry docks to be put on the naval bill in the House, the dry-dock agitation is as dead as a smelt, although from President McKinley down through every official of the Government it is a well-known fact that our most crying need to-day and our greatest national shame comes from our lack of dry docks.

I mentioned the subject to Senator Hale, of Maine, to-day. He is chairman of the Senate Naval Committee. He has been reckoned as favorable to dry docks, and I really think that he is. Nevertheless, he told me that in his judgment unless the dry-dock appropriation originates in the House the Senate would probably do nothing about it.

You go over to the Navy Department and see Secretary Long and Assistant Secretary Roosevelt. They are both very diplomatic. It is not their business to tell the weaknesses of our naval defense. Nevertheless, I can say, and say with absolute candor, that our navy is of practically no value in case of any contest with any considerable naval power, simply because we have no places whatever on the Atlantic coast in which to dock one of our big war vessels.

Do you realize that the fortification bill went through the House this week? It appropriated about $4,000,000. General Miles, commander of the Army, tells me that that sum is not sufficient to put into position the guns already arranged for, to say nothing about carrying on the work of fortifying our cities.

Nothing could be more stupid, nothing more shortsighted, nothing half so criminal, as this refusal of the powers that be, in the House of Representatives, to give liberal appropriations for dry docks and for fortifying our cities.

When Napoleon III made war with Germany a short campaign showed that he went into it without being in any ways prepared. If we got into a struggle with any European power a month's experience would show that we are in no way ready to fight anyone. In my judgment, the banks and chambers of commerce along our eastern seaboard could very well afford to subscribe enough to pay for the fortification of our cities and pay for its dry docks as a mere measure of insurance.

Nevertheless, unless something radical is done, this session of Congress will go by with its threats of trouble with Spain, and leave our seaboard absolutely unprotected.

Perhaps we shall not have any war with Spain. We shall not if the Administration can prevent it; but just so sure as we should, our weakness would become so clear that public indignation would be aroused, and as a result of the outrage that would follow our humiliation everybody in Washington in any way responsible for it would be overwhelmed. ATHERTON.

EXHIBIT No. 28.

A PECULIAR CONDITION.

It is a rather remarkable feature of the situation to-day at Washington that, although the Secretary of the Navy expresses the wish of the whole country in his recommendation for the construction of large modern dry docks at Government navy-yards along the Atlantic coast, it is quite doubtful whether Congress will comply with the recommendation. The situation is remarkable because it is rarely that Congress dares to antagonize the country at large and the Administration in a matter which concerns the national safety and welfare to so great a degree.

And yet the present situation does not come about altogether because of any sentiment on the part of individual Members of Congress. Probably if the question

was squarely put to members of the House and of the Senate a large majority them would promptly admit that the situation really demands the proposed app priations for dry docks. It seems, however, that the committees having such m ters in charge (that is, the Committees on Naval Affairs, on Appropriations, and Rules) are determined to prevent the House of Representatives from acting in t matter.

The subcommittee of the House Committee on Naval Affairs, having investigat the matter, has been absolutely convinced that consideration of the national ho and the national safety demands that dry docks should be constructed as soon possible. An attempt to save small sums now by delaying the construction of docks would, in the event of war, result in the loss of millions upon millions of d lars by the country because of the crippled condition of the Navy. Public sentim all over the country recognizes this fact plainly enough.

Undoubtedly the sentiment of Americans generally is in favor of economy in pub expenditure at this time. There will be no economy, however, and there may b tremendous loss to the country, if for any reason whatever Congress should within the near future to incorporate in the naval appropriation bill a satisfact provision for the equipment of navy-yards along the Atlantic coast with large, m ern, well-constructed dry docks. If those Members of Congress who now stand the way of Congressional action regarding the dry docks were to realize the ext and strength of public sentiment in this matter, it may be doubted whether s opposition would continue.

EXHIBIT No. 29.

WOULD HAVE TO GO TO PUGET SOUND.

Washington, February 16.—As an illustration of "saving at the spigot and wa ing at the bung," the present course of the Government in authorizing the build of large vessels for the Navy, and refusing to construct dry docks to take care them properly is striking.

The construction of the vessels which are now building in various parts of country proves interesting in this regard. The battle ships now under way are follows: The *Kearsarge* and *Kentucky* are nearly completed, and nearly 40 per cent the work on the *Alabama*, *Illinois*, and *Wisconsin* is also done, so I am told at Navy Department.

These five vessels, all of which will be first-class seagoing battle ships, belong two different types, the first of which was authorized in 1895, and includes the t twin ships, the *Kearsarge* and the *Kentucky*, which are building at Newport Ne Of the other three, the *Wisconsin* is being constructed at San Francisco, the *Illi* at Newport News, and the *Alabama* at Cramps in Philadelphia. The only dock wh will accommodate them, if need be, is in Washington State.

Think of the immense cost of these vessels, and add thereto the enormity of expe of maintaining them. Then think again of all the other large vessels in the Ameri Navy, and add thereto the cost of maintaining them also. And then calmly read plain, bold, and striking truth set forth in the so called Bunce report, which tre of the recent investigation of the dry-dock problem. I quote:

"The United States has a total of eleven naval dry docks. Only one at this tim that at Puget Sound, Wash.,—can take our battle ships."

How does that strike the average man? Authorizing the large vessels, with place to dock them, seems to be pure folly. It is not, however. We need these shi we ought to have them; but we need docks, too, and ought to have them, t Saving at the spigot and wasting at the bung is a bad policy for nations, as well individuals.

Let us suppose we are having a war with Spain. What are the positions m likely to be sought for by her? They are Massachusetts Bay, Long Island Sou New York and Chesapeake bays on the Atlantic coast. The positions strategetic important for the naval defense, and which should be strongly held, are the harb at and on their approaches, which are Portland, Me., Provincetown, the east entrance to Long Island Sound, and Sandy Hook at the entrance of New York B and the Cape Henry channel at the entrance to Chesapeake Bay.

On the Gulf coast the attack will be through the Florida or Yucatan channels, the natural defense will be on the line from Tortugas to Key West.

On the Pacific coast the positions of greatest importance are Puget Sound, Francisco Bay, and, contingent on its improvement, San Pedro Bay.

And now with our immense navy fighting Spain on the Atlantic seaboard and the Gulf coast, at present, if one of our modern battle ships gets out of order

requires docking, she has got to go away up to Puget Sound, Washington State, to be adequately treated.

Who has been so shortsighted as to let such an order of things come into being is immaterial now. It is a condition and not a theory which confronts us. Those who let it continue any longer will be held responsible sooner or later, and if Governor Long, as Secretary of the Navy, is able, with the assistance of Congress, to build up a system of dry-dock facilities throughout the country, he will have done more to enhance the true interests of the nation than has been done by any one man since Abraham Lincoln.

He is doing all he can, and so are the Massachusetts and other delegations in Congress. If the proposition to build dry docks is left out of the regular naval bill, this whole important subject will be sandbagged in the House on a mere point of order, on the ground that building dry docks is "new legislation," and the Senate will abide by the decision of the House.

Have we come to this? Economy ought to prevail, but if it has got to be invoked at the expense of the most vital part of a nation's armor, more's the pity. It would be better that we have fewer $6,000,000 Congressional libraries and other expensive things of a similar nature, and more dry docks, if it has actually come to this; but then, after all, let us cheer up; our dry-dock cherries perhaps will soon be ripe. They ought to be, goodness knows. The present situation, however, is a grave one, and makes the ordinary man shudder to think of it. It is simply disgusting, and the sooner it is remedied the better.

ATHERTON.

EXHIBIT No. 30.

ANOTHER STEP IN THE IMPROVEMENT OF GREAT BOSTON HARBOR.

Washington, February 20.—It will be remembered that in the last river and harbor appropriation bill, in which Boston was treated so generously, among the provisions of the act in which our harbor had a vital interest, was one for a survey with a view to securing a channel of 1,200 feet wide and 30 feet deep from the navy-yard to the entrance of the present main ship channel, and from the ship channel in President Roads through Broad Sound Channel.

Lieutenant-Colonel Mansfield has made his report on this survey, and it is very interesting as showing the rapid strides which have recently been made and which will continue to be made in making the harbor at Boston what it ought to be for the adequate accommodation of its immense shipping and commercial interests.

The Broad Sound channel, says Colonel Mansfield, has always been regarded as impracticable for the larger class of vessels, owing to the proximity of dangerous rocks and shoals. It has, therefore, been used only by vessels of light draft, more especially those bound to the eastward; the main ship channel being alone available for the larger class of vessels. He also states that the importance of developing this channel requires little argument; it is simply a necessity for the large and increasing commerce of the second greatest port on the Atlantic seaboard.

This new channel, continues Colonel Mansfield, would not only relieve the congestion found in the Narrows, but it would probably predominate in importance, from the fact that it would be more direct and free from complicated tidal disturbances, and be the natural course for the large transatlantic steamers. A wide, deep channel through Broad Sound, together with the channel through the Narrows, would make the port of Boston unique in that it would have two independent channels nearly at right angles to each other, offering a choice to the navigator in bad weather to and from the commodious and safe anchorage of President Roads.

The assistant engineer who participated in making the survey referred to states that but little difficulty will be encountered in obtaining 1,200 feet width and 30 feet depth. The estimated cost of enlarging the channel from the navy-yard to President Roads is $1,644,553. The cost of the proposed new Broad Sound channel is $481,941. Colonel Mansfield is of the opinion that the harbor is worthy of improvement to the extent of providing a channel 1,200 feet wide and 30 feet deep from the navy-yard to President Roads, and from President Roads through Broad Sound channel, and that work on the latter portion should be executed first. Owing to the difficulties and the expense attending the work he does not recommend the increasing of the dimensions of the lower main ship channel, as it is thought that the proposed improvement of the Broad Sound channel will amply meet the requirements of navigation.

ATHERTON.

EXHIBIT No. 31.

NEW YORK DRY DOCK.

There is a stratum of quicksand under it—The remedy.

The news from Washington that Representative Hilborn of the House Naval mittee would introduce a resolution calling for a Congressional investigation o alleged defective construction of the New York navy-yard dry dock is the subje quiet discussion among officers at the yard there.

One officer said that such a committee as Representative Hilborn would appointed could do no more than the numerous engineers connected with the Bu of Yards and Docks, who had examined the dock when done, and they all a that the dock was faulty in construction. They had long ago decided that i dock was to be saved it could only be done by converting it into a composite by concreting. Since the dock was built, he said, it had been discovered that was a stratum of quicksand under the flat on which it is located. Besides this d it was pointed out, that after the construction was begun the original plans been altered so as to increase the area, and at the same time no provision had made for increasing the strength of the material to be used. The experienc continued, with the New York dry dock was not much different from the De ment's experience with other wooden dry docks in the country. They were all stantly in need of repairs. It had long ago been agreed by the engineers who examined the dock that the real secret of the faulty construction lay in the fact the Government had attempted to practice a false economy when it ordered a wo dry dock instead of one of stone. The reason assigned at the time the plans fo big dock were adopted for building it of wood instead of stone was that the co a wooden dock would be less than half that of a stone dock. The fallacy of argument was now aparent, and that was about all that any Congressional comm could get out of an investigation.

EXHIBIT No. 32.

REPAIRING THE BIG DRY DOCK.

The Navy Department wants to save the Government loss.

Secretary Long has instructed the judge-advocate-general of the Navy to asce and report what steps can be taken by the Government to reimburse itself fo large sum of money that has been or will be expended in repairing the big dry at the New York Navy-Yard. The investigations of the special engineer board revealed work so faulty that there is even a question whether the costly dock ever be made serviceable. The original contractor for building the dock was a named Gillis, who had had no previous experience in dock building. He failed the contract was taken from him and awarded to T. & A. Walsh, at their b $370,000 to finish the work. There has been trouble with the structure ever sin was begun, and the discovery of flowing sand, suggesting that an underlying b quicksand had been ruptured, has caused the gravest apprehensions for the fu of the dock, unless the most radical and prompt remedies are applied. It is sca expected that Engineer Menocal, who is now in Nicaragua with the canal com sion, can be heard from in answer to the allegations that have been made ag the character of his superintendence over the construction of this dock in less a month at the earliest, but it is said to be apparent that a court-martial will fo unless the officer can advance some entirely unexpected defense.

EXHIBIT No. 33.

SOIL UNDER DOCKS.

Naval experts report that there is sufficient support in Brooklyn Navy-Yard—De are due to man—Mr. Endicott denies alleged assertion of contractors that the is to blame—Mr. Hilborn is satisfied—Member of House Naval Committee bel docks can be maintained in the Brooklyn yard.

To convince Congress that the defects in dry dock No. 3 at the Brooklyn N Yard are not due to the soil Secretary Long has forwarded to Representative Hill

senior member of the House Naval Committee, the views of expert officers on the subject.

Walsh Brothers, who built the dock, assert, it is alleged, that the structure was constructed in a substantial manner, but that the quicksand character of the soil caused the development of defects. The defense of Civil Engineer A. G. Menocal is expected to raise a similar issue.

Naval Constructor Bowles, who is superintending the repairs to the dry dock, and Civil Engineer M. T. Endicott, assistant to the Chief of Bureau of Yards and Docks, were ordered to make an investigation. Their letters have been forwarded to Mr. Hilborn.

Mr. Hilborn told me to-night the officers had agreed that the navy-yard soil is fully capable of resisting the pressure from the weight of the three docks now in the yard. Mr. Endicott says in his memorandum:

SOIL SUFFICIENT FOR TWO DOCKS.

"The character of the soil at the New York Navy Yard, upon the shores of the Wallabout Channel, has been fairly well known for the last sixty years." He cites the opinions thereon derived by Col. Loammi Baldwin in 1835, Professor Courtenay in 1842, and William J. McAlpine, who was the engineer of the granite dock for more than three years. He says the granite dock "has remained one of the most substantial in the world for nearly half a century.

"Dry dock No. 2, a timber construction, was successfully founded at that yard in 1890," he continues, "under conditions that were difficult, but less troublesome than those met in the granite dry dock. It has remained stable up to the present time, and has shown no lack of ability to sustain the heaviest ships admitted.

"Dry dock No. 3 was founded upon a site immediately adjoining that of No. 2, and performed its office perfectly until it sprung a leak, but at the present time it appears that the injuries it suffered were due to faults of man and not to any inherent inadaptability of the soil.

"The materials found in this site have been sand and clay in varying proportions, with some mica, all in irregular formation, with water, which has rendered it 'quick' in nature and particularly liable to develop springs.

"The entire water front of the yard as it exists to-day was originally under water, so that all dry docks constructed at that yard are necessarily wholly or in part upon sites called 'made' land. The locality is not an ideal one or what would be classed as very good, but it contains no obstacles that can not be successfully met."

CIVIL EXPERTS MAY EXAMINE SOIL.

Secretary Long may send civilian experts to Brooklyn to investigate the condition of the soil.

I saw Representative Hilborn to-night, and he said:

"The statements made by Naval Constructor Bowles and Civil Engineer Endicott coincide with my opinion. Representatives of floating dry-dock schemes with whom I have talked, however, assert that the defects developed in dry dock No. 3 were due to the character of the soil.

"If it should be shown that the soil is responsible for causing defects, then it would be throwing money away to continue to repair dock No. 3.

"I do not believe that the Brooklyn Navy-Yard is an ideal site for docks, but that we can build a dock there and maintain it is proven by the fact that we have one wooden and one granite dock that have done good service.

"Dry dock No. 3 accommodated the battle ship *Massachusetts* satisfactorily. Its bottom was able to stand the weight. The defects which have developed have appeared at the entrance to the dock, and have no reference, it is my opinion, to the character of the soil."

EXHIBIT NO. 34*a*.

FACTS ABOUT DRY DOCKS.

From an interesting pamphlet compiled by the Simpson Dry Dock Company, giving a brief history of the naval dry docks of the United States and of a number of dry docks of private companies, it appears that the timber dock is better, more endurable, and cheaper than the granite or concrete dock. It appears also that the dock of the Baltimore Dry Dock Company, made of yellow pine and white oak and finished in 1880, is one of the best in the United States, being constructed on correct principles and satisfactory in all respects. It has an extreme length on coping of 504 feet and

on the floor of 470 feet and the depth of gate sill below high water is 23 feet. While not so large as the largest steamers of the present day require, it meets the needs of nearly all ships that enter this port, and testifies by its continued usefulness to the soundness of the principles on which it was built.

The trouble about granite or concrete docks is that they are extremely costly, take many years to construct, are almost sure to leak, cost heavily yearly for repairs, and are generally unreliable. This at least is the conclusion to be drawn from the history of the dry docks made for the United States. Their cost is three or four times that of wooden docks, and experience does not show that they last longer in good condition. As respects repairs, the wooden dock has a great advantage, needing few or no repairs, as a rule, for fifteen or twenty years.

There is another species of dock, the floating dock, made of steel, which costs about twice as much as the timber dock, and is said to be less durable and efficient. In this country such docks are used only in repairing the hulls of the smaller classes of vessels, but abroad they are used for large vessels. At Bermuda the British Government has an iron floating dock, made in 1869, which is 381 feet long over all and 330 feet long inside. It cost $1,250,000. The objections to such docks are numerous. The one at Bermuda costs $65,000 a year for repairs. The iron rusts rapidly in parts which can not be painted. It lacks stability. Added to this is the fact that besides the dock itself there must be a basin in which to sink it, which basin must be kept deep and costs heavily for dredging.

EXHIBIT No. 34*b*.

TIMBER DOCKS INFERIOR.

The House Naval Committee, however, ignored the recommendations of experts.

Washington, March 18.—The decision of the House Naval Committee authorizing the construction of six dry docks, with a provision that five be built of timber, is not viewed with favor by the civil engineers and officers of the bureau under whose charge this part of naval material comes, and is contrary to the recommendations of the special dock board and of the experts sent to Europe for the purpose of investigating the dock system in the leading centers of commerce.

While the timber structure is far less expensive than the masonry, the repairs necessary to maintain the former type in condition almost make up for the difference in original cost. This is emphasized by the sums expended on docks in the past eight years and the disgraceful condition of some at the present time. The officials of the docking bureaus here say that a first-class masonry dock, with a capacity for the largest war vessels, will cost $1,250,000, and a timber dock of equal dimensions could be built for $700,000. The latter dock has not the life, however, of the former, and is constantly going to decay.

The timber dock of New York was completed seven years ago, and during this time $85,000 has been devoted to repairs. That at Port Royal has been ready for the Navy only a few years, and has docked so far but two war vessels, yet in this period the Navy has been compelled to expend $75,000 to maintain it in condition. The Norfolk dock has required similar expenditures, the damage sustained being chiefly due to the ravages of the marine worm.

There is in Great Britain a masonry dock built in the latter part of the eighteenth century which is still available for small vessels. In it many of England's famous war vessels have been taken. In view of the experience of British dock owners with the solid type and cost of repairs to wooden docks, the experts are surprised the committee should insist on authorizing timber docks.

EXHIBIT No. 35.

WEALTH OF STONE IN MARYLAND.

Rich deposits adapted to building purposes—Quarrying rocks and marbles in the State has become a leading industry—Superior quality of all the several varieties—Research into the matter by the Geological Survey—Will publish an exhaustive treatise with abundant information—Much labor expended with excellent results—Sections where best specimens are found.

Prof. George P. Merrill, curator of geology in the United States National Museum at Washington, D. C., a recognized authority on the natural structural materials of

the country, in conjunction with Prof. Edward B. Matthews, of the Johns Hopkins University, under the auspices of the Maryland geological survey, yesterday completed the manuscript for a valuable volume upon The Building Stones of Maryland, which will form a part of the forthcoming second report of the State geological and economic survey. The volume will be the first comprehensive survey of this important branch of Maryland's industrial wealth. It represents nearly two years of painstaking labor on the part of the authors and numerous other geologists who have assisted.

The material, as brought together in this volume, gives a history of the development of the stone-quarrying industries of the State, summarizes the deductions of all previous investigations of this field, and contains, in addition, the results of recent extensive studies throughout the entire northern portion of the State through which these deposits are scattered.

SOME OF THE CONTENTS.

The comparative and economic values of the various stone areas are given in comprehensive detail, with extensive tabulated statements, maps, drawings, photographs, etc. The scientific value of the whole is made complete by the addition of chemical analyses of the various stones, as well as tables showing the amount of pressure which the rocks will stand without crushing; the ratio of absorption, showing the relative amount of moisture which the rocks may take up in exposure to dampness. Such knowledge is an important feature in judging the economic value of rocks, as this determines, in great measure, the rapidity with which the rocks disintegrate when exposed to atmospheric agents. Closely allied to the absorption tests are the tables on freezing and thawing, which have been prepared with great care by the authors. They also note the amount of material lost through the alternate freezing and rending of the stones by the effects of expansion and contraction of water particles in the interstices of the rocks.

These tests are of wide scientific and economic interest, as they determine the mercantile value of the stone. Professor Merrill has devoted considerable space in his treatment of the general properties of rocks to an elucidation of the scope and value of deductions from such tests to architects and builders. The volume, therefore, when complete, will not only be of interest to geologists and other scientists, but will be of especial interest to those who are engaged in quarrying the rock, carrying it to market, preparing it for use, and, finally, to architects and builders.

Stone quarrying has been a prominent feature among Maryland's industries for more than a century, her stone deposits furnishing varieties of utility in every branch of stone industry, from statuary and ornamental work to the humble cobblestone.

THE HISTORY OF THE INDUSTRY.

The volume, in its historical discussion, shows that at the beginning of the present century a wave of interest in internal improvements swept over the country. The hills and valleys were scoured in search of material to supply the demand for stone. The building of railroads and canals and the erection of bridges required by these were important factors in stimulating the development of the State's quarrying industries. The Port Deposit quarries first felt the spirit of activity in supplying the approaches and foundations for the road and toll bridge across the Susquehanna River, which was constructed by the Port Deposit Bridge Company within or near the present limits of the town of Port Deposit. Other quarries at various points began operations at this time in marble, granite, sandstone, and slate; but the chief impetus to this industry, which assured for it permanency in Maryland, came when the United States officials found that the sandstones used in the White House and other prominent Government buildings at Washington were unsatisfactory, and that it was necessary to locate sources of supply other than those at Acquia Creek, Virginia.

In 1847, before plans for the Smithsonian Institution had been fully completed, Prof. David Dale Owen, one of the most distinguished geologists of that day, was sent to inspect the deposits of marble, granite, and sandstone then being quarried on a small scale at Cockeysville, Woodstock, and Seneca Creek, this State. He took back to Washington many specimens of the rocks exposed and gave glowing accounts of the abundance and quality of the deposits. The regents of the institution were in a quandary as to which of the three specimens to choose, so excellent were they all. The contracts were finally let for the Seneca stone. This contract attracted widespread attention to the Maryland quarries. At once an industry was born which to-day contributes more than one million dollars annually to the wealth of the State.

WHERE THE STONE IS FOUND.

In their description of the prominent areas the authors show that all of the quarries of the State of any importance are situated in the northern group of counties from Cecil to Garrett. Each of these counties has deposits within its limits extensive enough and of sufficient excellent quality to support one or more good-sized industries.

Summarizing the details of the entire report, we may glean the following facts concerning the stone industry in the different counties:

In Cecil County the principal building stone is granite. Along the shores of the Susquehanna River rise bold cliffs which furnish ideal opportunities for quarrying. The quarries at Port Deposit furnish material for many of the first-class jobs throughout the country. The ease with which the stone may be loaded either on cars or schooners adds greatly to its value. It would be an important deposit in any case, because of its beauty and the ease with which it is worked. The Port Deposit granite appears so widely in Baltimore's residences and public buildings. It is a light, pleasing gray stone, mottled with more or less parallel flakes of black mica. At Frenchtown the quarry is much younger, but it bids fair to become an established and extensive enterprise.

HARFORD'S WEALTH OF SLATE.

Harford County abounds in a great variety of rocks, but it receives its chief revenue from two sources, viz, from the slate quarries at Delta and from the serpentine quarries on Broad Creek.

Maryland has never received due credit for the abundant and valuable deposits of slate in this county. This is so because all of the material is shipped from Delta, Pa., the State line passing through the town. The principal activity is all on the Maryland side of the line. The highest skill is required in splitting the slates to the desired thickness, and in order to become expert one must begin in early boyhood to follow the trade of his father. The art is retained in a few families from generation to generation, each skilled "splitter" imparting his knowledge only to his own son or to the orphaned children of a deceased fellow-workman.

The quarries of this area are situated in a single line along the top of the well-known "Slate Ridge." The value of the slate puts it among the very best of the blue-black slates of this country. Therefore, the expense of production is more than counterbalanced by the quality of the product.

BEAUTIFUL "VERDE-ANTIQUE."

From the time of the earliest Roman sculptors and builders men have prized and sought for deposits of the beautiful "verde-antique" marble which added so much to the beauty of the cathedrals of ancient Italy. Maryland is fortunate in the possession of many deposits of this beautiful and valuable stone. Nowhere do they abound more richly than along Broad Creek, in northeastern Harford Cou ty. These quarries are at present not worked owing to the lack of transportation facilities. Many of the private dwellings of the city contain specimens of this beautiful rock, a rock which is so well adapted to interior decorations, mantels, and ornamental slabs.

THE COCKEYSVILLE MARBLES.

The building-stone industry in Baltimore and Howard counties receives its stimulus from the proximity of the formation to Baltimore. The largest industries are centered in the quarrying of marbles at Cockeysville and the granites and gneisses along the Patapsco River, near Ellicott City, and at Woodstock. The quarries at Cockeysville and Texas first came into notice in the construction of the magnificent shaft erected on Mount Vernon Place to George Washington. The three blocks, comprising the figure of Washington, were originally quarried as a single piece over 17 feet long at the Taylor quarry near Cockeysville, and was presented by F. T. D. Taylor, of Baltimore County. It was this monument which called the attention of Architect Mills, of the Capitol, to the beauty and excellence of this stone. Hence the subsequent use of Cockeysville marble in many of the most prominent Federal buildings at Washington. The Beaver Dam quarries have developed a system of quarrying which has enabled it to furnish 40-ton monoliths for the new city courthouse.

SOME EXCELLENT GRANITES.

The granites about Woodstock have long been known, but were turned to little commercial account until after the visit of Prof. David Dale Owen in 1847. He called attention to the superior quality of the material, and remarked upon the

peculiar forms which the rock showed in the quarries. The rock here is a black-mica granite, varying from light to dark gray in color, of medium texture, but exceptionally well suited to general building purposes. It is found in the Fidelity Building, at Charles and Lexington streets. Somewhat farther down the Patapsco, near Ellicott City, on each side of the river, are smaller quarries of granite and gneiss. It was from these quarries that, in 1812, stone was hauled for the Catholic Cathedral in Baltimore, in teams drawn each by nine yoke of oxen, as told in a paper by Robert Gilmor, jr., published in 1814.

Other good deposits of granite are scattered through both counties, among which the most important is that at Guilford, a few miles north of Annapolis Junction. Here a beautiful, fine-grained rock, well adapted to monumental requirements, is quarried. This industry is handicapped by the lack of transportation facilities.

FREDERICK AND CARROLL COUNTIES.

Scattered through Frederick and Carroll counties the survey has found frequent exposures of marbles and limestones which may be of value as building stones. Most of them, however, are so fragile that little successful quarrying has been carried on. Still the stones are so beautiful that some means should be devised by which these marbles, as beautiful as the Tennessee or Sienna stone, may be utilized. The sandstones of both counties are capable of wide development whenever a demand is created and transportation facilities provided. Most of the quarrying at the present time is in small openings, or, where the operations are on a larger scale, the material is used almost entirely for fertilizing purposes, from which a large industry has developed. A notable exception is the extensive quarrying of Potomac marbles, or "calico rock," at Point of Rocks. This material first came into notice through a Baltimorean, who suggested that this rock was just the thing for the pillars in the Hall of Representatives at Washington. His suggestion was adopted, with the result that this almost unknown stone received the most prominent position among those represented in the construction of the interior of the Capitol at Washington. The stone is now quarried for interior decoration in cases where the great range in color and the irregularity in texture add to the beauty of the mosaics in which it is placed.

SENECA SANDSTONES.

Montgomery furnishes sandstone of such a nature that it supplies far more than all local demand. At Seneca Creek there is quarried a light reddish-brown sandstone of fine and even texture which is well adapted to all kinds of building and ornamental work. This is the stone which has been pronounced by a leading expert to be "one of the best Triassic sandstones in the country." This sandstone has been quarried in a more or less systematic way since 1774, when it was used in the construction of the old Potomac Canal. In 1832 it was used in the Chesapeake and Ohio Canal, and in 1847 it was chosen as the material for the Smithsonian Institution, in Washington.

IN WESTERN MARYLAND.

The authors show that the three counties west of the Blue Ridge Mountains contain abundant supplies of limestones, sandstones, and flags, which serve to satisfy much of the local demand for building stones. Most of these have not been developed as they deserve. Even at Cumberland material is imported from Ohio in preference to using the abundant supplies which may be found in the immediate vicinity.

The statistical portion of the report shows the following output for the year 1896-97:

Granite and gneiss	$355,000
Marbles and limestones	110,500
Slate	90,100
Sandstones	35,969
Serpentine	1,000
Lime and cement	472,392
Miscellaneous	2,000
Total	1,166,961

A feature of the volume is the illustrations. Five varieties of illustrations will be used. They are colored maps showing the distribution of the various sources of available building stones, heliotype plates of specimens of granites, serpentines, and marbles from various quarries, presenting the appearance of each of the stones in the most minute detail of form and tint; reproduced photographs of prominent quarries in the State; illustrations of hand specimens of the building stones, and

an especially valuable series of photomicrographs, presenting, with marve accuracy, the appearance of each stone under the microscope.

The heliotype plates will represent granites from Port Deposit, Woodstock, Elli City, and Guilford, sandstone from Seneca, serpentine from Broad Creek, ma from Cockeysville, and breccia from Point of Rocks. The maps will indicate distribution of granites and gneisses, marbles and serpentines, sandstone and qu ites (double), slates and flagging. The quarries shown will be those at Port Dep Falls Road, Cockeysville (two views), Seneca, Peachbottom, Bare Hills, Woods (two views), Mill, Column, Stevenson, Ijamsville, Edmondson avenue, Point of R quarry, and formations at Cumberland. The treatise on Maryland building st will be Part I, of Volume II, of the Maryland geological survey reports. Prof. liam B. Clark, the director of the survey, and the authors of the work are to be gratulated upon bringing together so many important facts, and for the systematic conducted study of the present condition of one of the State's important indust

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EXHIBIT 36.

NOT SUITABLE FOR A DRY DOCK.

Naval experts say Round Bay, near Annapolis, is too far from the sea to be utili

Washington, January 24.—Officials of the Navy Department do not favor the l tion of a Government dry dock at Round Bay, near Annapolis, on the Severn Ri and believe a survey would prove that the establishment of a naval station there is practicable, owing to the lack of water facilities. The communication of Gove Lowndes to the Maryland legislature referring to the subject has been read interest by the officials under whose direction dry docks come, but they declare t as the location of a dock always means the establishment of necessary shops to c on the repairs of vessels, it is more economical to have docks, when possible, at big navy-yards.

The fact that Round Bay is so far from the sea overweighs, in the opinion of dry-dock experts, all other advantages it may have. A battle ship or cruiser inj in action may require the immediate use of a dock, and the nearer the better, claimed. The officials seriously question whether a large ship could reach Ro Bay except by the expenditure of a vast sum of money to dig out a channel. however, the land is ceded to the Government it is possible some other use ma found for it.

The large ships of the Navy can not now approach nearer than 6 miles of Naval Academy, on account of a bar at the river's mouth, and as Round Bay is eral miles up the river, it is said a channel the entire way would have to be dred in order that vessels drawing over 20 feet could get to the dock. The experts no place on the Chesapeake Bay is suitable for the establisment of a dry dock account of the distance from the ocean. A vessel requiring docking could re Norfolk or Newport News, it is stated, many hours before she could possibly ge Annapolis.

EXHIBIT NO. 37.

WAR SHIPS NEED DOCKING.

Some of them long past the time required by the regulations.

Washington, March 4.—The Navy Department feels that it would be most des ble to dock some of the war ships now at and near Key West, and if it were not the present condition of affairs this course would be speedily adopted. The reg tions provide for docking every six months, in order to keep the bottoms of the ships free from marine growth. This period has been long exceeded in the cas several of the ships of Admiral Sicard's squadron.

The battle ship *Iowa* is the worst off in this particular, and it will be a year n month since she was docked. The battle ship *Massachusetts* comes next, and it be a year in May since she was docked. Even in northern waters this lengt time without docking would leave the bottoms of the ships badly fouled, but i considerably worse in tropical waters, particularly those about Florida, where marine growth is very luxuriant. The Navy officials say this condition is no serious in injuring the hulls of the ships as in crippling their movements. It m them slow to respond in action, and practically prevents rapid maneuvers.

While this condition is regretted, the Navy Department has determined not to attempt any docking at the present time. Instead of that the expedient less satisfactory than docking, but still valuable, of having the ship's divers clean the bottoms, will be resorted to in case of need. At present it is not thought that the necessities of the case require the divers to go to work. In case pacific conditions continue for another month or six weeks the Department hopes to have the New York Navy-Yard dock ready for use. In that case the ships would be docked one at a time, the *Iowa* going first, the *Massachusetts* next, and so on in the order of their greatest need.

EXHIBIT No. 37A.

JOINT RESOLUTIONS and memorial of the general assembly of the State of Maryland to Congress relative to the fortification, defense, and armament of certain places along the Chesapeake Bay, for the proper defense of the capitol of Maryland, at Annapolis; and of the Capitol of the United States, at Washington City, District of Columbia, and for the more perfect defense of the city of Baltimore, Maryland.

Whereas the capitol of the State of Maryland is at this time without adequate fortification, military defense, and armament in the event of an attack by a hostile force; and

Whereas in the opinion of competent military authority the defense of the approaches to the harbor at Annapolis is not only a direct defense of the capitol of the State of Maryland, but also an indirect defense of the Capitol of the United States, at Washington City, District of Columbia, and in effect and fact supplements the present and proposed defense of the Chesapeake Bay approaches to Baltimore City, Maryland; and

Whereas all said matters are of the highest national importance at this time, entitling them to the serious attention of the general assembly of Maryland and the immediate action of Congress, now in session: Therefore,

Be it resolved by the general assembly of Maryland, That the Senate and House of Representatives of the United States of America in Congress assembled be, and they are hereby, respectfully requested (by an amendment to the bill H. R. 7441, Fifty-fifth Congress, second session, "making appropriations for fortifications and other works of defense, and for the armament thereof, for the procurement of heavy ordnance for trial and service, and for other purposes," or by a proper amendment to some other pending appropriation or other bill) to authorize and make obligatory upon the Secretary of War to cause to be duly examined at once and report to Congress the character, kind, extent, and cost of fortifications and other works of defense and armament which ought to be established by the United States at those points along the western shore of the Chesapeake Bay, in the State of Maryland, known and designated as "Thomas Point," "Tolleys Point," "Horn Point," "Greensburys Point," "Hacketts Point," and "Sandy Point," and also along the western shore of Kent Island opposite to said named points, by proper defenses; either permanent to be established upon, or floating to be established at, said points and shore as they now exist; or by proper and adequate extensions thereof (either by piling or by stone walls, or by some other proper methods along and across and over the shoals opposite to and adjoining said points and shore as all of the same now exist, and as shown by chart No. 135 of the Coast and Geodetic Survey of Chesapeake Bay), so as to secure a protection, as near perfect as may be, for the due defense of that portion of the Chesapeake Bay which is situate between the western shore of Kent Island and said named points opposite thereto on the western shore of the Chesapeake Bay, and which defenses are believed to be necessary in order to properly protect the capitol of this State and the capitol of the United States, and also the approaches to the city of Baltimore via the Chesapeake Bay.

Adopted by the house of delegates March 15, 1898. Adopted by the State senate March 23, 1898. At Annapolis, Md.

The views of the general assembly of Maryland, as recited in its foregoing joint resolutions and memorial to Congress, are still further strongly confirmed by a very able article by Gen. Joseph B. Seth, of Maryland, published in the Baltimore American of March 28, 1898, as follows, to wit:

DEFENSES NEEDED FOR ANNAPOLIS.

The State capital in danger in case of war—A hostile army would be apt to take the city in order to reach Washington—Fortifications to protect her would make Baltimore doubly secure—Two points suggested—The route which an invader would probably follow in order to advance upon the national capital—Views of General Seth on the subject.

Since the overhanging war cloud has assumed an ominous hue many of the hitherto taciturn men of our community, known for their spirit of conservatism, have begun

to turn their attention toward suggestions burdened with the wisdom of pract
For instance, everyone is advising expenditure of utmost care toward the pr
of effective defenses in protection of our seaboard cities. Since it is genera
ceded that upon the bosom of the sea will ride all the possible perils whi
beset this country, it is imperative that due caution should be paid to the es
ment of proper and sufficient fortifications.

"We are all interested in the fate of Maryland and all that pertains to he
Gen. Joseph B. Seth. "Therefore it is natural that our first concern should be
when we stand face to face with the possibilities of war. Maryland is an im
point in the event of hostilities. And that for several reasons. In the firs
the splendid city of Baltimore is a tempting target for the enemy. And the r
cent waters of the Chesapeake offer the roadway for the enemy's navy. Bu
is another city lying contiguous to the Chesapeake which would probabl
more desirable to an adversary than Baltimore, and that is Annapolis.

"It may seem strange for any such statement to be made, and yet I belie
true. Why? That is very easy of explanation. In the first place, if co
should ever arise in which our foes should desire to advance on Washington,
and only possible route would be by way of Annapolis. A shrewd invade
hardly have the audacity to venture by water up the Potomac, nor woul
likely to undertake a campaign through Virginia. In truth, no road to Was
would be half so desirable as the one from Annapolis, that city being made t
of hostile operations.

"To make that feasible all that would be necessary would be merely the
of the fortifications at the mouth of the bay. Though that point is believe
thoroughly well defended, both with mines and other ingenious constructio
not satisfy my own judgment that the mouth of the Chesapeake is impassa
is not so easy to impregnably fortify a wide and mobile entrance to so large
of water as might be supposed. Therefore it is my impression that if war
be declared the city of Annapolis is far from safe. The very moment a sing
be it large or be it small, should ever effect its entrance into the bay, t
would be thoroughly and hopelessly at its mercy.

"I think there is less danger for Baltimore. That city is not dependent u
fortifications at the mouth of the bay. It has been abundantly supplied
splendid equipment of defenses which will preserve her harmless against
invasion.

"Since our State capital, however, is thrown open to the enemy, it strikes
a wise policy would suggest that some effective defenses be erected. Th
point in the bay where such could be achieved with the most perfect succ
fact there are two available sites. One is Sharps Island, just off the mout
Choptank River; the other is Poplar Island, farther north, lying near the e
to Eastern Bay. The same principle would apply in either case as to the n
the defenses selected.

"My idea is very simple. Each of these islands is near the center of the
peake, and their shores are almost brushed by the passing channel as it e
flows. Either island would afford a base from which could be set a series o
mines, placed at very close intervals, and stretching across the entire widt
navigable part of the bay. On the island thus selected could be erected for
fortifications, to which could be distributed a sufficiency of powerful guns of
tive and extended range. That part of the channel within the danger lin
land defenses could and should be full of mines, and the knowledge thereof
be disclosed to local pilots. Thus our ewn boats could pass and repass safely
such mines under the bay and long-range guns on either island, it would be
impossible for the strongest hostile fleet even to proceed farther than withi
tant sight below those defenses. Annapolis would be made safe, and Ba
doubly so. The Chesapeake would thus be made a protected harbor in which
fleet could at any time enter and lie behind these defenses utterly beyond th
of the largest combined flotilla possible for an adversary to mobilize against

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Exhibit No. 38.

The act of Congress approved March 3, 1885, making appropriations for f
tions and other works of defense (23 Stat. L., 434), created a board of which
retary of War was president, and commonly known as the Endicott B
examine and report at what ports fortifications or other defenses were most u
required, the character and kind of defenses, etc. This board submitted it
to Congress under date of January 23, 1886. The report was published as H
Doc. No. 49, Forty-ninth Congress, first session.

oard known as the Board of Ordnance and Fortification was created by the ication appropriation act of September 22, 1888 (25 Stat. L., 489), which speci- he powers and duties committed to the board. The scope of these duties was what modified by the fortification appropriation acts of August 18, 1890, Feb- 24, 1891, and July 23, 1892. The act of 1891 also added an additional civilian ber to the board.

Board of Ordnance and Fortification is still in existence, and it submits annu- o the Secretary of War a report of its proceedings. Its reports to date have published as Congressional documents as follows: House Ex. Doc. No. 12, Fifty- d Congress, first session; House Ex. Doc. No. 11, Fifty-second Congress, second n; House Ex. Doc. No. 23, Fifty-third Congress, second session; House Ex. No. 136, Fifty-third Congress, third session; Senate Doc. No. 56, Fifty-fourth ress, first session; Senate Doc. No. 32, Fifty-fourth Congress, second session, enate Doc. No. 27, Fifty-fifth Congress, second session.

EXHIBIT NO. 39.

COAST-DEFENSE WORKS.

tary Alger approves General Miles's report—Will now be submitted to Chair- an Cannon of the House Appropriation Committee.

shington, November 11.—Secretary Alger has approved the estimates for the defense works submitted by General Miles, and they will be submitted to man Cannon of the House Committee on Appropriations some days before the ng of the session. In accordance with law the expenditures at the different rts are itemized, but the Secretary will ask for authority to spend the money mp sums, so that work on any particular defense may be hurried to meet the gencies. General Miles divides the fortification appropriation as follows:

h of Penobscot River	$175,000
and, Me	1,173,000
h of Kennebec River	198,500
mouth, N. H	377,000
n Harbor	1,347,000
Bedford, Mass	204,000
gansett Bay	833,000
se of Long Island Sound	1,070,000
rn entrance to New York	489,000
ern entrance to New York	1,489,000
oaches to Philadelphia	441,000
oaches to Baltimore	499,000
oaches to Washington, D. C	604,000
pton Roads	464,000
oaches to Wilmington, N. C	937,000
leston Harbor	150,000
oaches to Savannah, Ga	415,000
rest, Fla	50,000
cola Harbor	32,000
oaches to Mobile, Ala	397,000
oaches to New Orleans	319,000
ston, Tex	412,000
Diego, Cal	725,000
Francisco	1,336,000
nbia River	605,000
t Sound	1,140,000
Champlain	48,000

his report to the Secretary, General Miles makes no reference to possible com- tions with Spain, but says:

lthough the general desire of our people is to maintain a condition of peace all nations, and the policy of the Government is one of good will and peaceful ons with all others, yet nothing could be more injudicious than to remain in a tion of insecurity, and permit the lives of millions and the accumulated wealth any generations to be destroyed or endangered by any foreign power with we are liable to come in contact, and the general plan for defense which has adopted by the Government should be steadily pursued until the nation is in a tion of security and safety, which a due regard for self-preservation would id."

EXHIBIT NO. 40.

GIGANTIC WATERWAY.

A canal which Russia proposes to build contemplates the connection of the Baltic and Black seas to be traversed by battle ships.

The Russian Government will begin next spring upon a stupendous piece of engineering work, which, like the trans-Siberian Railroad, will be of great strategic and commercial value to her when completed. The project contemplates the construction of a canal connecting the Baltic and Black seas, which can be traversed by battle ships of the heaviest tonnage at 6 knots per hour.

By means of this canal Russia will be able to mobilize a large fleet in the Baltic in 167 hours, by bringing to that sea the Black Sea squadron, or can collect in the Black Sea in the same time the Baltic and Black Sea fleets.

In case of a general European war over the division of China at the time of the completion of the canal it would not be difficult for Russia to send her fleet through the Bosphorus, the Sea of Marmora, and the Dardanelles into the Mediterranean, down the Suez Canal, across the Indian Ocean to China, while she could utilize the trans-Siberian Railway to transport troops.

The canal will remove the necessity of sending a fleet across the North Sea and down the Atlantic in order to reach the Mediterranean, and through that sea reach the Suez Canal and China, and it was pointed out that in case of war Great Britain and Germany would take measures to see that the Russian fleet did not pass through their waters without a hard struggle.

It is officially stated that the canal, when completed, will connect the city of Riga, on the Baltic, and Cherson, on the Black Sea. Advantage will be taken of the Dwina River, at the mouth of which Riga is located, and of the Dnieper River, which flows into the Black Sea, and at the mouth of which Cherson sits.

It has been estimated by the Russian engineer that to connect the two rivers 125 miles of excavation must be made.

The length of the canal will be 1,000 miles. It will have an average depth of 28.4 feet. The cost of the work will be $97,000,000, and it must be completed in 1902.

It is frankly admitted by the Russian authorities that the canal is being built for military purposes, just as the Trans-Siberian Railway is being constructed, but they say that the waterway will be of benefit commercially.

The wheat raised in the southern part of Russia near the Black Sea and the coal and petroleum obtained from that section can be transported more cheaply to markets by railroads than by steamers going through the Bosphorus into the Mediterranean.

Sixteen cities are situated along the route of the proposed canal, and they will be benefited by its construction.

"Russia maintains a formidable fleet of battle ships and cruisers in the Black Sea," said a well-known commander, "such action being in violation of the provisions of the Berlin treaty.

"The construction of the canal will mean that the fleet can be reenforced within seven days at the utmost by an equally formidable fleet from the Baltic, and in case of the dismemberment of Turkey or a necessity for a large force of naval vessels in Asiatic waters, Russia would be able to get her reenforcements to that section ahead of any other European government which would be compelled to use the Atlantic Ocean and the Mediterranean.

"So far as Turkey and China are concerned, the completion of the Russian canal will place the Czar in a position which will be envied by all the other European governments."

EXHIBIT NO. 41.

AMENDMENT intended to be proposed by Mr. Gorman to the bill (H. R. 9378) making appropriations for the naval service for the fiscal year ending June 30, 1899, and for other purposes.

Insert the following on page 27, at the end of line 2:

That the sum of one million five hundred thousand dollars, or so much thereof as may be required, be, and the same is hereby, appropriated for the purpose of obtaining, under the direction of the Secretary of War, a continuous ship's channel of not less than one hundred and fifty feet wide at the bottom, with side slopes one on three, and thirty feet deep at mean low water, from Chesapeake Bay, via the Severn River to Round Bay, State of Maryland, with a tidal basin in said Round Bay, on the

direct line of said channel, of not less than one thousand feet square and thirty feet deep, to be located at a place suitable therefor, situate anywhere in or on said Round Bay, whereat shall be constructed, under the direction of the Secretary of the Navy, to be paid for out of this appropriation, a granite or granite and concrete dry dock with dimensions capable of docking with facility any United States naval vessel of the maximum number of tons displacement under all possible conditions of load, now built or contemplated to be built, and whereof all facings shall be of dressed granite, and of a depth of water over the sill of not less than thirty feet at mean low tide.

That the place in or on said Round Bay whereat said granite dry dock shall be so constructed, and whereat said tidal basin shall be so established and excavated, together with ample grounds contiguous to either thereof and suitable therefor, shall be selected by the Secretary of the Navy; and title to any and all of said properties shall be acquired for and in the name of the United States by said Secretary, by purchase or condemnation or gift or grant; and if acquired by purchase or by condemnation the same shall be paid for by the Secretary of the Treasury, out of this appropriation, whenever there shall be filed with him a certificate of the Secretary of the Navy reciting that said sites and grounds (describing all of same) have been selected by him, said certificate of the Secretary of the Navy to be accompanied with an opinion of the United States Attorney-General as to the validity of the title to all of said properties; and in the event that the Attorney-General shall declare said title to be valid, he shall, in his said opinion, recite the names of all persons, respectively, to whom such payments should be so made for and on account of any of the properties so acquired for the uses and purposes herein stated. That the work of all kinds to be done on or performed in connection with the construction of said dock, whether built under contract or otherwise, shall be done and performed under the immediate supervision and direction of the "Instructor at the United States Naval Academy at Annapolis, Maryland, in charge of the branch of naval construction, &c.," in order among other things, that "the post-graduate classes of students in the matter of docks, docking, and naval construction, &c.," and the entire corps of midshipmen at said Academy may derive a substantial benefit and practical instruction from the construction of said dock at said place, and all of whom shall frequently visit said dock while the same is under construction; and also whenever any United States vessels are to be there docked or undocked, said visits to be made under such rules and regulations as the Secretary of the Navy may from time to time prescribe.

Exhibit No. 42.

AS TO DRY DOCKS.

In the present condition of affairs at Washington, it is gratifying to note that the Massachusetts member of the President's Cabinet has won commendation all over the country because of his sensible and patriotic attitude regarding public questions which are now of extreme importance. It is, therefore, of national interest that Secretary Long has called attention to what he believes to be one of the gravest defects in the national system of defense to-day. His warning has been heeded and has made a great impression all over the United States, except possibly at Washington. Whether it will be heeded and observed there remains to be seen.

Secretary Long declares that the nation "would be in an unfortunate plight if the country went to war," for the reason that, however slight the injury a battle ship might suffer, the use of this vessel might be entirely lost, owing to the absence of a single dock in which she could be quickly placed and repaired. In effect the Secretary has announced that unless Congress proceeds to remedy this grave weakness the country must remain in an ill plight as regards the possibility of war. His warning is gravely given because the subject is serious and the need is most pressing.

Nobody disputes the truth of the Secretary's statement. Perhaps in Congress to-day 95 per cent of the members of that body are convinced that Secretary Long is right and that patriotism, the instincts of self-preservation, and all sentiments of regard for the national safety and honor alike require that at least one large modern dry dock be built with all the expedition possible. These members regard it as almost criminal to betray their country; but nevertheless it is doubtful whether an appropriation for a dry dock, such as is required, will be made at the present session of Congress.

No proper objection, it is said, stands in the way of the appropriation. Members of the Senate insist, however, that the House should first pass such a bill as will be necessary. Under the rules of the House as they are now in force, legislation of this kind must be introduced either by the Committee on Naval Affairs or under a special rule adopted for that purpose, or by unanimous consent. Unfortunately the

antagonism of a few members of the Naval Committee to the proposition and an unwillingness on the part of the Rules Committee to introduce any special rule bars the way to the legislation, which public sentiment all over the country solemnly and insilently demands.

WHY WE NEED DRY DOCKS.

Washington, February 24.—Probably we shall not have war with Spain, and yet two-thirds of all the men in public life in Washington believe we shall. This is generally the best foundation for the opposite being the fact.

The plan of autonomy for Cuba is a dreary failure. Mr. McKinley said in his annual message that if it should prove so, then we should probably have to interfere. In Spain the general election occurs the middle of next month. It is a foregone conclusion that the reactionists will win the day. Then out goes Sagasta and the present government. Out with it goes autonomy. The Weyler crowd will come into power. They will not only be pledged to subdue Cuba, but also not to in any way be under the influence of this country. The almost cringing attitude which Spain has lately assumed will give way to a haughty and indifferent one.

If we demand an indemnity for the blowing up of the *Maine*, and we shall have to, the new Spanish ministry will probably refuse to pay it. In that case no power can prevent our proceeding to extremes. The first overt act will probably come from Spain, but when it comes it will only mean that both sides understand that trouble is inevitable.

Nobody talks now in Washington of the Cubans. They are a past issue as compared with the blowing up of the *Maine*. That is something which is not forgotten. It is very quiet here now. The refusal of those in authority to say much of anything about it is suggestive. Meantime at the Navy Department everything is being done to get ready for trouble. If any man will keep a level head and not get carried off his feet, it will be Governor Long. Very much like him in this respect is President McKinley. For all that, both of them recognize that the crisis is very grave.

Suppose we should have trouble. Our fleet at the Dry Tortugas can whip anything the Spaniards could bring against us. In the meantime, at a week's notice, we could put 100,000 armed men into Cuba, carrying them over and landing them from the terminus of our railroads in Florida. They would overrun Cuba in a fortnight. They would hem the Spaniards up in Havana. Our fleet could not enter that port. What happened to the *Maine* shows how dangerous a harbor that is. In addition, the forts at the entrance are very heavily armed and difficult of passage. We should blockade the port, cut off all supplies, and within a short time Havana would have surrendered from sheer starvation.

Now we have not a single Atlantic seaport city which can be defended against Spain's battle ships. New York is the best off in that respect, but any first-class battle ship can force its way into that harbor any time during the next ninety days. Of course, Boston and Portland are absolutely hopeless, while Philadelphia, being up a river, might be defended by means of torpedoes. Our Atlantic seaboard would have to depend on our navy for protection, but ship for ship we are better off than the Spaniards. In number of ships we are about on par with them, but put an American vessel alongside a Spanish ship of the same tonnage and armament, and we should easily come off winner. Our ships are new, in a high state of efficiency, and equipped with fine crews. The Spanish fleets in contrast are about the lowest of any of the European navies in efficiency and discipline.

Nobody knows what Spain will do. None of the rules which govern great nations govern her. She is perfectly reckless, and will be, if the reactionists get control, perfectly irresponsible; so for the next three weeks no change in the present condition of affairs need be expected. If, at the end of that time, the conservatives carry the Cortes, then the people in Washington will be prepared for almost any kind of action.

Nothing is being done to improve our dry-dock system, which, upon the statement of the President, of Secretary Long, and of all the high naval officials, is our especially weak point now. Speaker Reed insists that the Government is in no condition financially to go into a general dry-dock scheme, although for less than $6,000,000 we can furnish dry docks capable of holding our largest vessels at Boston, New York, Philadelphia, Norfolk, Port Royal, New Orleans, and Mare Island. In the case of New York, Philadelphia, Port Royal, and Mare Island, this would be done by enlarging existing docks.

The suggestion has been made that while the House rules allow that to be done, they will not permit the building of new docks to be authorized on the naval appropriation bill; so, in the end, the economists in Congress may take refuge behind the rules of the House along the lines I have suggested, in which event Boston will get no dry dock, and nothing will be done toward increasing our facilities for naval defense east of New York.

ATHERTON.

EXHIBIT No. 43.

BOSTON DRY DOCK.

project is dead if any Bay State man weakens—Methods of the most active nature must be employed.

shington, March 4.—There is absolutely no prospect of a dry dock being author-
t Boston by this Congress unless methods of the most active nature are employed.
Committee on Naval Affairs will not report in its favor, and even if it did, whoever
into the chair during the discussion of the naval appropriation bill will rule
of order, as has been done in the last two sessions of Congress.
he Senate no chance exists for it, unless it goes over from the House. The two
ng members of the Senate committee, Messrs. Hale, of Maine, and Chandler, of
Hampshire, will oppose any provision for a dry dock at Boston, which puts an
the matter, so far as any initiative by the Senate is concerned.
matter of dry docks has not yet been considered in the Naval Affairs Committee
House, other than to hear some arguments in regard to the merits of various
of docks. A majority of the committee doubtless naturally believes in putting
dock at Boston, but the strong pressure of a most influential character which
en brought to bear against Boston is having its result.
n opportunity could be had to vote on the matter, the House of Representatives
oubtless authorize the dry docks recommended by the naval board. The ques-
hether the Republicans of the House shall be given this opportunity is now
consideration. If the Massachusetts delegation stand firmly for dry docks,
is a chance to secure them. If any part of the delegation weakens, the dry-
project is absolutely dead.

ATHERTON.

EXHIBIT No. 44.

BOSTON DRY DOCK.

Majority of committee inclined to report favorably.

shington, March 9.—Matters regarding the dry dock for Boston look a little better
ht. A majority of the Committee on Naval Affairs is inclined to report favor-
for such a structure, and the Massachusetts delegation will hold a meeting
rrow to act upon the matter.
arrangements can be made so that the project will not be thrown out on
nt of order in the House, the chance is fair that the desired result may be
pliahed.

ATHERTON.

EXHIBIT No. 45*a*.

DRY-DOCK PROBLEM.

n will be included in bill to be reported this week—Country being placed where it ought to have been long ago.

shington, March 13.—The dry-dock matter, in which Boston is so earnestly inter-
, seems to be a parallel case to that of a drowning man.
onth ago, before the Spanish situation became acute, the whole proposition was
ng for the third time in unfair parliamentary tactics and a strong desire for
my in the national expenditures.
ton, with other places where docks ought to be built, watched the proposition
to a deep parliamentary grave.
present war cloud came to the rescue and has saved the idea from death.
ctically all the members of the House Naval Committee now believe in the
rization of new dry docks by the present bill, which will be reported this week.
en the step is taken Boston will surely be included. As indicating how things
ng, it is but necessary to say that a month ago it would have been impossible
ve persuaded the committee to provide for new battle ships at this session.
week its members authorized three at $6,000,000 each, without even so much as
rmur of protest. It is going the same way on dry docks. Those opposed to
ng them a month ago are now the most enthusiastic supporters of them. The

threatened trouble with Spain is doing all this. The engine of the national defense is being made spick and span in every sense.

New artillery regiments, $50,000,000 for war purposes, three new battle ships, have gone and are going through with a rush, and dry docks bid fair to join the procession. In other words, the country is being placed on a footing where it ought to have been placed long ago.

Who is to blame for the delay does not matter.

Those who prolong it, however, will have to answer their people.

Hence the present activity, unanimity, and general display of common sense, the equal of which Washington has never seen.

These times force politics to the rear and statesmanship to the front.

Who shall say, then, after this war cloud passes away, that it did not give birth to a national defense worthy the name, including an adequate army, a powerful navy, and some modern dry docks, which we need more than anything else at the present time. If these thing come, as they undoubtedly will, and we have no war, this threatened trouble will have been the best thing this country has had happen to it for fifty years.

ATHERTON.

EXHIBIT NO. 45*b*.

DOCK AT BOSTON.

It will be reported favorably to-day by the committee—Massachusetts delegation will also vote for one at Portsmouth.

Washington, March 14.—The dry-dock matter will be settled in committee to-morrow. Everything is favorable for a dry dock at Boston.

In the determination to make proper plans for defending the nation all small considerations are being laid aside.

The Committee on Naval Affairs had a long discussion of the matter to-day. They reached no vote. They will vote to-morrow. A member assures me to-night that of the 17 members at least 12 are in favor of the dry-dock programme. This, as now arranged, includes docks at Boston, Philadelphia, New Orleans, and San Francisco.

The one opposition to the Boston dock comes from those interested in the Kittery yard. The New Hampshire men are for a dock at Kittery.

Mr. Barrett, as chairman of the Massachusetts committee on the matter appointed by Senator Hoar, to-night asked Judge Hilborn, of California, who is managing the dry-dock matter in the committee, to state to-morrow that the Massachusetts delegation, without exception, will support and vote for not only a dock at Boston, but for one at Portsmouth. If the latter is not authorized at this session, it will be next winter, but Judge Hilborn will ask that two docks be voted this session for New England. The only questions remaining are of detail.

Hawley of Texas, who wants a dock at Galveston instead of New Orleans, desires a commission appointed to report at the next session. This will not prevail. Some of the members prefer to authorize three or four docks, leaving their location to the discretion of the Secretary of the Navy. Others are in favor of the programme mentioned above.

In any case the Boston dry dock is sure to be reported favorably by the committee. The gantlet to be run then is that the whole programme may be ruled out on a point of order in the House.

The statement is freely made to-night that if the bill is threatened an appeal to the patriotism of the House will be made, which will either cause the withdrawal of the point of order or that it will be voted down, as practically all the members who have considered the subject are satisfied that the previous decisions that dry docks are not an essential part of our naval establishment are not good parliamentary law.

The committee will also report three battle ships, to cost $6,000,000 each, fully the equals of any ships in the world.

ATHERTON.

EXHIBIT NO. 46.

THE GOVERNMENT DRY DOCKS.

Pending the consideration of the subject of dry docks by the Committee on Naval Affairs of the House, the Bureau of Yards and Docks has furnished Chairman Boutelle with the record of work in the Government dry docks, so far as available, since their construction. The facts in brief are interesting.

lock at Portsmouth, N. H., was first used November 26, 1852. It has been in erefore, 46 years. During that time the footing by days when vessels have the dock shows it to have been in use 9 years, 11 months, and 13 days and out 5 years. During this period, however, many vessels were hauled out on the railway used in connection with the dock, for repair.

ecord furnished of the Boston dock goes back only to 1867, but the Bureau s to make search farther back than that. This record shows that during years 118 vessels of all classes have been docked, and that the dock has been d 3,375 days and unoccupied 7,585 days. During that time, however, it is ay, several vessels were in dock for which no record was kept and reported, unexplained reason.

ecord of the docks at New York begins with July 13, 1889, because the pre- cords were destroyed by fire. The footing by days as to the three docks d, given by years, are as follows:

	1889.	1890.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.
pied	155	516	358	409	607	646	576	452	622	68
cupied	16	214	372	323	123	84	154	280	162	44

lition a few private vessels were docked, the days of occupancy not being

ecord of the League Island dock begins March 27, 1891, and shows that during riod of seven years 39 vessels have been docked, the days occupied having

orfolk Navy-Yard and dock were partially destroyed in 1861 and business resumed until 1867, since which time the dock has been occupied by Gov- vessels 6,687 days, by private vessels 112 days, and unoccupied 4,263 days. the completion of the Port Royal dock in 1895 but three vessels have been the *Amphitrite*, *Indiana*, and *Foote*, occupying the dock only 16 days in all. ock at Puget Sound was first used in April, 1896, since then it has docked naval vessels and one merchant vessel, occupying but 85 days out of 624. port has been received from the Mare Island dock.

EXHIBIT No. 47.

MORE DRY DOCKS NEEDED.

R POST: I find the inclosed clipping from the Boston Advertiser in the

bottoms of our war vessels at Key West are foul. They are crippled thereby. gest of the battle ships can not get into any of our dry docks. At Habana niards have a fine dry dock. In 1896 and 1897 amendments to provide dry ere ruled out of order in the House of Representatives at Washington. In plan is to stifle them the same way. This in spite of the protest of Presi- cKinley, in spite of the protest of Secretary Long, and yet to-day without ks our Navy is helpless, and our coast, particularly that of New England, less. Remember this, if we have trouble."

not use enough of the appropriation of $50,000,000 just made to build dry arge enough to remedy the evil complained of.

C. SHAMBAUGH, *1108 K Street NE.*

H 9.

EXHIBIT No. 48.

VOTED FOR NEW DRY DOCKS.

Naval Committee agrees upon construction of five—They will be located mouth, Boston, League Island, Algiers, La., and Mare Island—Three are to ilt of wood.

onstruction of five modern dry docks was agreed on yesterday by the House tee on Naval Affairs. They are to be located at Portsmouth, N. H.; Boston, League Island, near Philadelphia, Pa.; Algiers, near New Orleans, La., and

Mare Island, near San Francisco, Cal. These docks, all of which are to be en new structures, are to be of wood, except those at Algiers and Portsmouth. material of construction of these will not be determined until to-day. The i tions are that the dock at Portsmouth will be built of stone from near-by qu and that at Algiers of steel. The decision of the committee was the outcom protracted and at times animated discussion. The final vote choosing the named was 7 to 3.

The opponents of the project first contended against their construction o eral principles, and then separately opposed the sites that were selected. argued that the docks should be located either where the approaches or de water were sufficient to admit the ingress of the largest battle ships or wher already have been made under Government direction to put the approach state of preparation to receive the largest vessels by the development of both and width of channel, or that the work on the channels should be undertak temporaneously with the dry docks. It was agreed, however, that the docks should be made capable of accommodating the largest class of warships.

The principal reason for the conclusion to build of wood was economy, but also stated that docks so constructed might remain in good condition long for all practical purposes, and that by the time their usefulness ceased, develo in the structural field or a change in the character of present dock ideas migh A motion to vote on the docks separately was voted down by 6 to 5, and th were voted on as a whole and authorized.

There was also a hearing given the Massachusetts delegation in Congress sented by Representatives Lovering, McCall, Moody, and Simpkins, wh appointed at a joint meeting of the Massachusetts members of both Houses ye morning to present the claims of Boston for a dry dock there. They wanted an priation of about $1,300,000 for a dry dock, equipped to accommodate the vessels, to be erected at Boston, though they contended they would favor als Portsmouth or Kittery Point after one had been built at Boston. They poin that in case of war the New England coast would be attacked, that the wea other attractions of that section would invite foreign invasion, and that th no dry dock on the coast that would accommodate a large battle ship. Th dicted that in the case of war a battle would be fought off Cape Cod, an would be no place to dock an injured vessel. They cited the 27-foot depth harbor, and proposed enlargement of the width of the channel at Boston, a cluded that the need of a dock at Boston was imperative. The committee d action, and will probably give other hearings.

EXHIBIT No. 49.

MORE DRY DOCKS.

The strain in the relations of this country and Spain has thus far wrough lent results in directing Congressional attention to the imperative need of the for an adequate naval and military equipment as a guaranty of peace. The of the artillery bill and the appropriation of $50,000,000 for the national def the first substantial evidences of the long-delayed awakening of the legisl the grim fact that this country has outgrown its means of self-protection. propositions are pending that tend in the same direction. The three-battali will, it is thought, be passed in this emergency, and will accomplish the mos able results for the Army, placing it on a more effective footing and enabli cope with modern conditions.

The House Naval Committee took action in the same direction yesterday, voted, 7 to 3, to incorporate in the naval appropriation bill a provision for t struction of five large dry docks, to cost in the aggregate about $5,000,000. Thi practically follows the recommendations of the naval board that inquired i subject last summer and submitted a careful report. Much trouble has been enced by the Navy in late years by reason of the fact that the ship list h increased out of proportion to the equipment for caring for the vessels and them at the top notch of efficiency. The modern man-of-war is susceptib many disarranging influences that a dry dock is a virtual necessity. Any pr stay in the water of the southern seas will incrust the bottom of the ship wi nacles that not only add to the weight, but present such a rough surface to th that the speed capacity is materially reduced. To remove these the ship docked, and this process forms, indeed, one of the most necessary features of naval administration.

The naval officers and officials have appreciated the gravity of this requi

t, as is the case at times with much-needed public buildings, serious delay has m caused by unreconcilable differences of opinion among the legislators with ard to the sites for the docks. The naval board recommended certain sites that re, with one exception, favored by the majority of the committee yesterday, ladelphia being substituted for Brooklyn as the place for one of the docks. The ks, according to this action, will be located at Portsmouth, N. H., Boston, Philphia, New Orleans, and San Francisco. This distribution of the necessary lities for caring for modern vessels will, it is thought, accommodate the needs he Navy for some years, and will grant a maximum of benefit, by reason of the enience of the docks, to the ordinary cruising grounds of the home fleets.

ns it is to be seen that the "war scare," as the existing sentiment along the lines ealthy patriotism is unthinkingly called by some, is producing excellent results will endure long after the present difficulties have been settled by diplomacy, ration, or war. The nation has realized its duty and is responding to the call.

DOES NOT CIRCULATE

55TH CONGRESS, 2d Session. } SENATE. { DOCUMENT No. 213.

ACQUIRING CERTAIN PROPERTY IN ANNAPOLIS AS AN ANNEX TO THE UNITED STATES NAVAL ACADEMY.

MARCH 29, 1898.—Referred to the Committee on Appropriations, to accompany amendment to H. R. 9378, and ordered to be printed.

Mr. GORMAN presented the following:

LETTER FROM THE CLERK OF THE CITY COUNCIL OF ANNAPOLIS, MD., TRANSMITTING COPIES OF RESOLUTIONS, OPINION, ESTIMATE OF COSTS, AND AGREEMENT OF THE MAYOR, COUNSELOR, AND ALDERMEN OF THE CITY COUNCIL OF ANNAPOLIS, STATE OF MARYLAND, IN THE MATTER OF ACQUIRING CERTAIN PROPERTY THEREIN AS AN ANNEX TO THE UNITED STATES NAVAL ACADEMY, AS RECOMMENDED BY THE BOARD OF VISITORS TO SAID ACADEMY IN 1896, AS AUTHORIZED BY CONGRESS UNDER ITS ACT APPROVED JUNE 10, 1896 (29 U. S. STAT., 162).

COUNCIL CHAMBER,
Annapolis, Md., March 23, 1898.

SENATOR: In accordance with the order to me directed therefor, by the honor the mayor, counselor, and aldermen, constituting the city council of Annapolis, Md., I have the honor to transmit you herewith copy of certain resolutions by them heretofore adopted, and of certain tion by them heretofore had, in the matter of certain property in s city recommended to Congress by the Board of Visitors to the ited States Naval Academy in 1896, to be duly acquired by the ited States as an annex to the United States Naval Academy, as thorized by Congress in its act approved June 10, 1896 (29 U. S. Stat., 6), to which are attached a copy of an official map of said property, l also of an extract of said report of said Board of Visitors relating reto; and all of which papers it is respectfully suggested you may ve printed as a Senate document. Please also find herewith a proed amendment to the naval appropriation bill H. R. 9378, Fifty-h Congress, second session, which you are also respectfully requested present to the Senate, and with the aforesaid papers to have duly erred to your honorable Senate Committee on Appropriations.

I am, Senator, very respectfully, your obedient servant,

P. E. PORTER,
Clerk of the Council.

Hon. A. P. GORMAN,
United States Senate.

RESOLUTIONS, OPINION, ESTIMATE OF COSTS, AND AGREEMEN THE MAYOR, COUNSELOR, AND ALDERMEN OF THE CITY CO OF ANNAPOLIS, STATE OF MARYLAND, IN THE MATTER OF AC ING CERTAIN PROPERTY THEREIN AS AN ANNEX TO THE U STATES NAVAL ACADEMY, AS RECOMMENDED BY THE BOA VISITORS TO SAID ACADEMY IN 1896, AS AUTHORIZED BY CON UNDER ITS ACT APPROVED JUNE 10, 1896 (29 U. S. STATUTES

Whereas Congress, in its act "making appropriations for the service for the fiscal year ending June 30, 1897, and for other pur approved June 10, 1896 (29 U. S. Statutes, 368), instructed the of Visitors to the U. S. Naval Academy, "when visiting said Ac in 1896, to fully examine into and report to Congress the avail and desirability of acquiring as an annex to the grounds of said Ac so much of the property adjoining thereto in the city of Ann Maryland, as is situate between the north side of Hanover stre east side of Governor street, the north side of King George stre the west side of Holland street, and the probable cost ther purchase or condemnation for public use;" and

Whereas the said Board of Visitors, when visiting said Acad June, 1896, did examine the ground so described, and did "fav report to Congress on the proposition to purchase the land in qu and did recommend the purchase thereof," but did not report "th able cost thereof by purchase or by condemnation for public use

Whereas by virtue of a resolution of this council, adopted De 20, 1897, the city surveyor, and tax collector, and treasurer of th have duly prepared an accurate map of said property, and also tabulated statement from the official assessment records of thi showing exactly the present assessed valuation of all of the p property so described in said act of Congress and in said rep said Board of Visitors, and also of all the improvements thereon, assessed valuation is now the official basis of taxation for a purposes, and which map also accurately represents the exact lo and dimensions of all the public streets and alleys within the li said property so named in said act of Congress:

Therefore be it resolved by the mayor, counselor, and aldermen city council of Annapolis, Maryland, That a copy of these resol and of said map and statement be transmitted by the clerk council to the senior Senator in Congress from Maryland, Hon. Gorman, with the request from this council that he may lay the before the Senate for the information and action of Congress in said premises.

Passed January 10, 1898. P. E. PORTER,
Clerk of the Cou

SECOND.

Be it resolved by the mayor, counselor, and aldermen of the city of Annapolis, State of Maryland, That the clerk of this council, transmitting to the delegation in Congress from Maryland (th its senior Senator, Hon. A. P. Gorman) a copy of the resoluti it adopted January 10, 1898, be, and he is hereby, directed to also mit therewith a copy of this resolution, declaratory of the opinio of this council as to a fair price of all the land, etc., described report of the board of visitors to the U. S. Naval Academy i and in the act of Congress approved June 10, 1896 (29 U. S. St 368), a copy of an extract of which report is attached hereto, r part hereof, and marked Exhibit "A."

SEC. 2. That in the opinion of this council a fair and reas

price of all the private property described in said act of Congress, n said report of said Board of Visitors (which price includes all of surveys to be hereafter made, and also of preparing maps of ch surveys, and also all costs of search of title, and also of all costs paring and of recording deeds, and of maps of each and of every vision of land so hereinbefore referred to, and also including any ll miscellaneous expenses in anywise connected therewith; and all ch costs should be paid for by the respective owners of all of said rty), would be at this time a sum equal to 25 per cent in excess of esent assessed valuation of all of said property, the total amount of ($64,638.50) is shown on the face of the map of a survey made l property, and prepared by the city surveyor of Annapolis, Mary- nder the order and direction of this council, and conditioned hat each owner of said properties, respectively, shall have the ge of at once thereafter removing any and all improvements from bdivision of said land so to be granted and so granted.

t the total costs and value at this time of all of said private prop- ould thereby aggregate the sum of $80,799.37.

. 3. That in the event the United States shall desire to acquire the beds of the streets situate within the exterior limits of all of nd, then and in that event this council agrees that it will transfer y's title to the beds of all the streets situate within the exterior of said land so described, upon condition that this council shall he privilege of at once thereafter removing from said streets all eet and sidewalk covering and curbing, for public use elsewhere city: *And provided also*, that Governor (or Martin) street from val Academy gate to the south side of King George street, and ch of King George street as is situate between the west side of nor (or Martin) street and the east side of Holland street, and d street from the south side of King George street to the north Hanover street, be properly curbed and paved, and the middle street covered with first-class vitrified brick or Belgian blocks, e other first-class suitable street covering; all to be selected by be paid for and laid at the costs of the United States, in a sum exceed, however, the sum of $12,085.40, thereby making the total gate costs to the United States of acquiring full title to the entire o situate within the exterior limits of the land so described m of $92,884.77, and which aggregate sum this council declares in its opinion, be a fair cost price and probable cost, to be paid United States on an equivalent consideration for the acquisi- title, "by purchase or by condemnation for public use," to all nd so described in said report of said Board of Visitors to the Naval Academy in 1896; and also in the act of Congress approved 0, 1896—an act entitled "An act making appropriations for the service for the fiscal year ending June 30, 1897, and for other ses" (29 U. S. Statutes, page 368).

RICHARD H. GREEN, *Mayor.*
ROBERT MOSS, *Counselor.*

H. ELLINGHAUSEN,
JOHN H. BRIGHT, JR.,
ELMER E. PARKINSON,
JOS. H. BELLIS,
WEEMS RIDOUT,
WILEY H. BATES,
} *Aldermen.*

roved: Annapolis, Maryland, February 4, 1898.

P. E. PORTER, *Clerk of the Council.*

Assessed value of the lots, etc.

No.	Names.	Value.	Number of square feet.	No.	Names.	Value.	Nu
1	Elizabeth Anderson	$894.00	1,487.5	36	Mrs. Nason	$392.50	
2	Ida J. Anderson	855.00	1,487.5	37	John Nason	480.00	1
3	Geo. August	1,300.00	1,785	38	John Frank, jr	820.00	2
4	C. N. Joyce	1,700.00	1,785	39	John Frank, sr	1,705.00	17
5	M. Hencke	1,280.00	1,866	40	....do	910.00	5
6	H. McCusker	940.00	1,440	41	M. Oger	1,010.00	1
7	Kealy's heirs	1,960.00	3,593	42	Jas. I. Johnson	770.00	6
8	Mrs. Brashears	2,680.00	5,667.7	43	Kealy's heirs	450.00	1
9	....do	2,330.00	4,761.6	44	Rev. W. S. Southgate	612.00	4
10	C. R. Blackstan	555.00	900	45	....do	900.00	1
11	W. M. B. & L. Association	450.00	900	46	A. E. Jones	400.00	
				47	A. Knowles	545.00	
12	S. Snowden	500.00	900	48	Mrs. Churchhill	1,350.00	1
13	S. A. Collins	380.00	900	49	W. S. Southgate	200.00	1
14	Kealy's heirs	830.00	1,276	50	Kealy's heirs	560.00	1
15	C. N. Joyce	1,600.00	3,420	51	....do	565.00	1
16	A. Calhoun	255.00	855	52	J. T. Mullhall	505.00	1
17	H. Lowrie	550.00	855	53	Wm. H. Smith	215.00	
18	J. Anderson	950.00	1,425	54	Heirs of G. Franklin	920.00	
19	S. F. Chaney	950.00	1,425	55	A. Noonan	325.00	
20	F. L. I. Gilhaus	2,572.00	1,891	56	R. Bishop	360.00	
21	G. W. Brown	950.00	3,480	57	E. Jacobson	750.00	
22	Mrs. W. H. Hopkins	445.00	2,817.5	58	S. Parodi	850.00	
23	P. Hakan	900.00	3,450	59	J. L. Benjamin	540.00	
24	H. McCusker	1,900.00	5,275	60	B. Lamb	1,045.00	
25	J. L. Benjamin	250.00	2,637.5	61	F. L. I. Gilhaus	1,940.00	
26	S. Frazier	1,300.00	2,706	62	C. Hogan	470.00	
27	M. Cusick	1,400.00	2,250	63	M. Lewis	629.00	
28	E. Powers	696.00	1,050	64	J. L. Benjamin	296.00	
29	S. E. Collins	650.00	1,820	65	A. Whipper	920.00	
30	C. Hogan	772.00	1,710	66	Hardy & Rodgers	792.00	
31	E. Powers	566.00	1,501	67	P. Maloney	924.00	
32	Estate of J. Russell	1,356.00	4,595.5	68	Wm. A. Stepney	682.00	
33	Salvation Army	.....	2,098	69	J. I. Johnson	1,504.00	1
34	E. Powers	1,500.00	4,550				
35	J. L. Benjamin	576.00	4,459		Total amount	62,138.50	2

SUMMARY.

Square feet in—
- Block A 1
- Block B 1
- Block C 1

Total 2

Square feet in—
- Hanover street .....
- Bridge street .....
- Water street .....

Number of square feet in the square—
- Blocks A. B, and C 2
- Hanover, Bridge and Water streets 1

2

Assessed value of blocks A, B, and C:
- Block A ..... $
- Block B 2
- Block C 1

6

Recapitulation:
- Number of square feet in the square 2

- Assessed value of square ..... $
- Add to the amount the value of J. P. Cherling house on lot .....

Total amount 6

(*For plan showing the square bounded by Hanover, Governor, King George, and H streets, in the city of Annapolis, see map.*)

I hereby certify the above map is a true and fair description of the square bo by Hanover, Governor, King George, and Holland streets, in the city of Ann State of Maryland, and the assessed value of the same is taken from the asse books of said city, made in 1896 by a law of the general assembly of Maryla

LOUIS GREEN, *County Surv*

ANNAPOLIS, MD., *January 8, 1898.*

A.

RACT FROM THE REPORT OF THE BOARD OF VISITORS TO THE NAVAL ACADEMY, 1896.

ANNAPOLIS, MD., *June 6, 1896.*

The Board of Visitors begs leave to submit its report, as follows:
oard has been in session from June 1 to June 5, inclusive, and has witnessed rcises in a programme laid down by the Superintendent. It has also made ations, by its committees and otherwise, of many matters relating to the ıtration and organization of the United States Naval Academy.
Board of Visitors begs leave to submit the following recommendations:

* * * * * *

We recommend the purchase, at a fair price, of the land described in H. R. ction 17, as an annex to the grounds of the United States Naval Academy.

* * * * * *

: OF THE SPECIAL COMMITTEE ON THE "AVAILABILITY AND DESIRA-Y" OF PURCHASING CERTAIN LAND NAMED IN H. R. 7542, SECTION 17, AS NNEX TO THE GROUNDS OF THE UNITED STATES NAVAL ACADEMY.

neeting of the visitors held June 4 a special committee, to consist of Messrs. Robinson, and Meyer, was appointed to fully examine into the availability irability of acquiring as an annex to the grounds of the United States Naval y certain property described in H. R. 7542, page 23, section 17, as follows:
That the Board of Visitors of the Naval Academy, when visiting said y in eighteen hundred and ninety-six, shall fully examine into and report to retary of the Navy and to Congress the availability and desirability of ıg as an annex to the grounds of said Academy so much of the property ıg thereto in the city of Annapolis as is situate between the north side of r street, the east side of Governor street, the north side of King George ınd the west side of Holland street, and the probable cost thereof by purchase ondemnation for public use."
meeting of the board on June 5 it was on motion resolved that Mr. J. W. be added to this committee. It was also on motion resolved that this com-so enlarged, proceed to examine the land proposed to be added to the grounds Jnited States Naval Academy and report to the full board on its availability, the desirability of its addition to the grounds of the United States Naval y.
neeting of the full board held on June 5, at 3 p. m., the chairman of the com-Mr. Gibson) reported for the committee, as follows: "We have examined ınd described in H. R. 7542, section 17, and report favorably on the proposal to ıe the land in question."
nendment to the report was presented by Mr. Weeks to the effect that one-ɜ land described would satisfy the wants of the academy. The amendment adopted by the full board. The report of this committee stands as above, recommend the purchase of the land in question.
ıctfully submitted.

CHARLES H. GIBSON.
AD. MEYER.
JOHN W. WEEKS.
J. B. ROBINSON.

* * * * * *

REPORT OF THE COMMITTEE ON FINAL REPORT.

committee respectfully present the foregoing report of the Board of Visitors, ıas been compiled under the authority and according to the instructions of ıle board. The signatures of the particular copy here submitted have, by ruction of the board, been signed by your committee.
ıctfully submitted.

EDWARD S. HOLDEN.
J. C. TAPPAN.
PHILIP B. LOW.
CHAS. H. GIBSON.
AD. MEYER.

* * * * * *

ıclusion, we have the pleasure to say that the excellent condition of affairs Jnited States Naval Academy reflects the greatest credit upon the executive

capacity of the Superintendent, of the commandant of cadets, and of the c
officers in general.

All of which is respectfully submitted.

J. B. ROBINSON, *President.*
JOHN C. RICHBERG, *Vice-Pres*
J. C. BURROWS.
C. H. GIBSON.
P. B. LOW.
AD. MEYER.
EDWARD S. HOLDEN.
ROBERT B. HOWELL.
F. WALCOTT JACKSON.
CHARLES SCOTT.
J. C. TAPPAN.
JOHN W. WEEKS.

The SECRETARY OF THE NAVY.

H. R. 9378, FIFTY-FIFTH CONGRESS, SECOND SESSION.

IN THE SENATE OF THE UNITED STATES.

March —, 1898.

Referred to the Committee on Appropriations and ordered to be printed

AMENDMENT

Intended to be proposed by Mr. Gorman to the bill (H. R. 9378) m
appropriations for the naval service for the fiscal year ending
30, 1899, and for other purposes.

Insert at the end of line 22, page 45, the following:

"To enable the Attorney-General to acquire, by purchase or co
nation or gift or grant or concession, that particular property
in the city of Annapolis, State of Maryland, and more partic
described as lying between the north side of Hanover street, an
side of Governor street, and north side of King George street, an
side of Holland street, recommended by the Board of Visitors
U. S. Naval Academy in 1896 (under the authority vested in said
by Congress in its act approved June 10, 1896, 29 U. S. Statute
to be purchased as an annex to the U. S. Naval Academy, the s
$92,884.77, and the Attorney-General is hereby authorized and di
to acquire said described property within the limit of cost, and
manner and upon the terms and conditions, as near as may be, as
in the resolutions, opinion, estimates of costs, and agreement of t
council of Annapolis, Maryland, printed in Senate Document N
Fifty-fifth Congress, second session."

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55TH CONGRESS, 2d Session. | SENATE. | DOCUMENT No. 214.

ARGUMENT FAVORING THE ANNEXATION OF HAWAII.

MARCH 30, 1898.—Ordered to be printed.

Mr. FRYE presented the following

ARGUMENT, WRITTEN BY THE LATE JOHN DEAN CATON, EX-CHIEF JUSTICE OF THE STATE OF ILLINOIS, FAVORING THE ANNEXATION OF HAWAII.

The following argument was written by the late John Dean Caton, ex-chief justice of the State of Illinois, for the information of the late W. Q. Gresham when he was Secretary of State, and has recently been found among his papers:

THE ANNEXATION OF HAWAII IS DESIRABLE AND SHOULD BE DONE.

[By JOHN DEAN CATON, ex-chief justice of Illinois.]

My attention has been called to a very able article in the May number of the Forum, written by that eminent jurist, Judge Cooley, entitled "Grave obstacles to Hawaiian annexation," in which he groups together the most cogent reasons I have heard presented against the annexation of the Hawaiian Islands to the United States, a subject which is at this time very properly engrossing the attention of the American people. As a jurist he will readily appreciate not only the propriety but the necessity that both sides of this controverted question should be presented, in order to enable him whose duty it is to form an opinion on the subject to do so wisely and justly, that is to say, so as to promote the best interests of our country and of mankind, both for the present and the future. Hence I venture to make some suggestions which lead me to different conclusions from those arrived at by the eminent jurist. To me it appears proper to consider the matter under separate heads.

First. Does the Constitution of the United States authorize the annexation of Hawaii to this country? This is only denied by the learned judge inferentially. If he argues against it, in the course of that argument it seems to me he proves its existence. If at one time his reasons against the power would have had weight, events since have completely disposed of the objections which he urges. If the framers of the Constitution intended that the territory of the United States should never be extended beyond the limits which it then occupied, they certainly inserted no word in that instrument manifesting such an intention. It may be that those great and wise men did not fully grasp or comprehend the future greatness of the Government the foundations of which they were then laying. Either by accident or

through the direction of a wise Providence, they abstained from inserting words of restriction which would have inhibited the acquisition of other territories over which the ægis of the Constitution might be extended.

If, as was supposed by Jefferson and many others in his day, the absence of express authority implied an inhibition, wisdom and indeed absolute necessity impelled him to act without that express authority which he so much desired, and he made a treaty with France, by which he purchased Louisiana for the United States, whereby an immense tract of land was added to our territory. By that purchase he did not obtain the fee of the soil, as to a large part of it, but the sovereignty only; that is, the right to make laws for its government. That right was acquired in as absolute a condition as it had existed in the sovereignty of France, the grantor. If Jefferson at first thought that it was necessary, or at least prudent, to obtain an amendment to the Constitution sanctioning the act, the consensus of opinion of the inhabitants of the United States was such as to remove his own scruples, and he joined with his fellow-citizens in the construction of the Constitution which held that the purchase had been made in pursuance of authority conferred by that instrument. Here was an instance of contemporaneous construction, perhaps the most potent of any to be found in the history of our jurisprudence, and it so conclusively settled the question that none but the most captious or irreconcilable have ever ventured to doubt it since.

The purchase of Florida soon followed in pursuance of the same authority conferred by the Constitution. In these two instances the allegiance of subjects was transferred from one sovereignty to another without their consent any more than that of the acres of ground composing the territories. And such has been the case in every instance where we have acquired new territory, excepting that of Texas. The act of transfer of allegiance was just as violent as was the title to a slave. As to them the transfer was as forcible as it would have been had the territory been acquired by conquest. This transfer of allegiance is just as liable to be effected by force as by volition. Suppose, unhappily, we should find ourselves at war with Great Britain, and suppose further that we should be so fortunate as to completely overrun and conquer Canada, and in the treaty of peace all that Dominion should be ceded to the United States, our title would be as complete as it is over any other of our dominions, not to the fee of the soil in all cases, but to the sovereignty absolutely; and in the transfer of sovereignty the voice of every inhabitant of the country would be absolutely silent and no one will at this day question the constitutional power of the United States thus to acquire the title; indeed, the same thing did actually occur in our late war with Mexico.

It is not a question whether the moralist will approve of the manner in which that war was brought about. We have only to look at results in the consideration of questions of this kind. In the latter precedent Mexico, for the time being, was a conquered country. Its capital was in possession of our armies, its governing officers were fugitives, and according to the customs of nations in the past we might have governed the country arbitrarily, had we chosen to do so. And while our heavy hand was thus pressing down upon their nominal rulers, we compelled them to cede to us a large portion of their territory, and that, too, without asking the consent of the inhabitants whose allegiance was thus transferred by force and, in most cases, against their will.

Not a line can be found in the Constitution authorizing this proceed-

ng any more than in the other cases mentioned, but the authority merely follows from the necessity of the case and the customs of mankind. Self-preservation, as well as self-interest, compelled the exercise of this power, and the universal appreciation of this necessity prompted a construction of the Constitution which admitted the power to acquire new territory either by purchase or conquest.

Judge Cooley would limit this power to the acquisition of contiguous territory only. Where does he find authority for this limitation? Confessedly not in any language in the Constitution, for the power itself is not found in its language, but he reasons it out from its convenience. The claim is that the power to acquire territory must be limited to contiguous territory capable of being made into States and admitted into the Union, with people homogeneous with our own. The facts correspond with his conditions in one regard only, and that is contiguity of territory, but are entirely inconsistent with his condition as to population. In all the cases already referred to, whether the territory was acquired by purchase or by conquest, the inhabitants were not of our own race, but of other races. With Louisiana we acquired a French population, differing entirely in habits, language, and laws from our own people; and so of Florida and Mexico.

But when we come to the acquisition of Alaska all the conditions required by Judge Cooley for making the acquisition of territory constitutional are entirely wanting. That territory was not and is not now contiguous to ours; it is separated by a wide tract of foreign territory owned and controlled by another sovereignty. It is true that before the boundary line was settled between the United States and British Columbia a great many people of this country set up the cry of "Fifty four-forty or fight," but when the boundary treaty was made this claim was abandoned, and with it all pretense of contiguity of territory ceased. Therefore Judge Cooley's contention that the claim, though abandoned twenty years before we acquired Alaska, satisfied the condition of contiguity seems to me quite untenable. He must consider it now settled that the condition of contiguity is not required by the Constitution of the United States to the acquisition of territory.

If the Constitution allows us to reach out 5 or 6 degrees and acquire territory must we consider this the constitutional limit, or may we not go a little farther? If we may go 6 degrees north point out the provision which inhibits us from going 30 degrees west. We have already acquired Pearl Harbor for a coaling station in the Hawaiian Islands, which is the only harbor on Oahu besides Honolulu. What is the extent of the rights thus acquired—whether the fee of the soil or some measure of sovereignty—I do not know, but certain it is that we have acquired some rights there which a sovereignty may hold, and if we may acquire them, whatever they may be, have we exhausted the acquisitive power permitted by the Constitution? The same fact exists on the island of Samoa and in many other distant countries demanded by our interests. The welfare of our country and its commerce compel the exercise of this power, which is nowhere expressly granted by the Constitution and yet has ever been exercised by the Government.

On this subject the practice of a century or more would seem to have formulated the rule that whatever the welfare of the country imperatively requires it to do, and is not expressly or impliedly forbidden by the Constitution, that the National Government is authorized to do; and most prominent among these things is the acquisition of new territory, whether it be contiguous or not.

One mode of acquiring sovereignty is by discovery, not only by

national explorers, but by private citizens. No well-informed statesman or jurist would dispute our right under the Constitution to acquire sovereignty in this way, no matter in what part of the globe it might be.

I think I have demonstrated that our General Government has the constitutional right to acquire title and sovereignty to territory in any part of the globe, either by purchase, by conquest, or by discovery.

The learned author of the article under review thinks that we can have no colonial possessions, because we have no means of governing them under the Constitution. It seems to me that this position is maintained by a mere quibble about words. When the power of control is measured by the extent of control exercised, our Territories have always been quite as dependent as the colonies of any of the countries of Europe, and we might just as properly call our dependencies colonies as Territories. Ever since the cession, in 1787, by Virginia to the United States, of the country northwest of the Ohio River, which she claimed by conquest alone, which was the first territory acquired by the United States under the present Constitution, all the territory which has been acquired, whether by purchase, gift, conquest, or discovery, has been held and governed by the United States as completely and absolutely as ever have any of the colonies of the other nations been held and governed, by whatever name they have been called.

The only difference is in name and not in substance. Whenever a State has been admitted out of any of these Territories, except in the Virginia cession, it has not been in pursuance of an absolute right, but has been a boon granted. If, in the first instance, provision was made in the act of cession that States should be admitted into the Union out of the territory thus granted, in no instance was the time when, or conditions under which, such admission should be made been fixed. That was left entirely to the discretion of the General Government. At one time 40,000 inhabitants was deemed sufficient for the admission of a State. That number has been gradually increased till at the present time it is about six times that number. Utah has been claiming admission for twenty years, all the time showing sufficient population to entitle her to admission if numbers could give it to her as a right. The truth is, these Territories have no absolute legal right to admission as a State which the Constitution of the United States guarantees to them. It is solely a matter of discretion with the General Government, and has been always so considered and treated.

The only right claimed is a sort of moral, but never a legal, right—a right which the General Government may withhold without any breach of the Constitution. The only question to be considered is one of policy; whatever is deemed best for the interests of the country at large and for the people of the territory, that the General Government is morally bound to do and nothing else.

As a question of constitutional power, then, I think if Judge Cooley were called upon to decide it judicially, he would consider it so plainly within the constitutional power of the United States to acquire the sovereignty of the Hawaiian Islands in any way which was satisfactory to the Government that he would hardly have patience to hear arguments upon it.

Second. I next propose to consider the question whether it is desirable to the people of the United States that that territory should be annexed to our Government. This can not be so conclusively established as the former proposition, but must depend on the judgments of men, and so long as the most able and judicious of men will arrive at different conclusions from the same facts, we can not expect that all

ıen will agree upon this question one way or the other. The most I an do, therefore, is to suggest the reasons which have led my judgment o the conclusion that it is for the best interests of our nation, and herefore desirable, that such annexation should take place.

Perhaps at the present moment it may make no great difference to ıs whether we possess the sovereignty over those islands or not, but ıations are not for a day only but for all future time, so to speak, ılthough we are well aware that that is but a mode of expression and ıt most, as we fondly hope in our own case, signifies a very long time.

When we look back and see the changes which have been wrought within the single century of our political existence we are admonished that we must expect vastly greater changes within the next hundred years. Our political independence was accomplished by only 3,000,000 of people, scattered along our Atlantic coast. Since then our population has increased by more than twentyfold and the territory actually occupied has increased by more than a thousandfold. Who at that time anticipated this? Even at the time of the formation of our Constitution, who in that convention thought that they were framing an instrument for the government of the territory which it now covers? It seems as if the hand that penned it was guided by Divine wisdom; the writer wrote so much better than he knew. This should admonish us that those who are acting not only for the present time but for the future, and, as we hope, for the far distant future, should strive to look into that future and wisely anticipate the conditions of things which are likely to arise, and to aid us in doing this we have many more lights for our guidance than had our forefathers.

The advance in the arts and sciences and in almost every department of human progress has been far greater than in any thousand years of previously recorded time; and he whose duty it is to anticipate and provide for the future will act wisely if he takes all these into his account. He may first consider what will be the population, wealth, and strength of this nation in any specified time in the future.

We have ten times more seacoast bordering on the Pacific Ocean than has any other nation, and he may well conclude that this will continue to be the case in the future. The country bordering upon this coast is as capable as any other of producing the elements needed for human sustenance and human happiness, and these capabilities are being rapidly augmented by human industry and human invention; and not less promising is the prospect for increased manufactories, all of which means increased commerce both by export and import.

The history of the past shows that the genius of our people is as well adapted to ocean navigation as to land transportation. If there is a lull at the present time in that branch of human industry, we may well assume that it is but temporary. The sagacious statesman will not fail to discover the cause of this and see that it is but temporary; and as he looks into the future he will see that great ocean covered with our commerce, carried on with the same energy and ambition as is now witnessed upon the land. True wisdom would suggest that this should be anticipated and provided for, and all whom we may admit to be the best qualified to judge of this seem to be unanimous in the opinion that no other spot on the globe is so important as these islands to this future commerce. I ask, feeling confident that no negative answer can be found, what man who is really qualified to judge has ever expressed an opinion not in entire harmony with this assertion?

It will hardly be denied by anyone that those who have made it the study of their lives to comprehend and master any particular subject

appreciate the better that subject in all its bearings by reason of s study. It is the wise policy of our Government to educate a clas our young men to the art of war in all its bearings, both by sea land. These studies must embrace not only defensive but aggres war, for all must admit that exigencies may arise when our natic interests may require the exercise of both these modes of warfare, those who are called upon to administer our national affairs wo undoubtedly be wanting in their duty should they neglect to prov for both these. The learned jurist, with whose views I feel constrai to disagree, objects to the expression which has hitherto been sidered as embodying the highest political wisdom, "In time of pe prepare for war," and would change it to read, "In times of peace pare against war."

Were I not compelled to conclude that he intended to convey a ferent meaning by this change of words, I should have assumed t he meant the same thing, but he gives us plainly to understand by manner in which his phraseology is introduced that he meant so thing else, and hence we are obliged to inquire what that chang meaning is. If in times of peace we prepare for war, we thereby pose to deter others from making war upon us or from going to with us, and in that way in times of peace we prepare against w but he would propose to prepare against war in some other way, the only other way I can think of is *not* to prepare for war in tim peace, so in order to do this we must disarm ourselves and proclaim the world that we will on no account fight to defend our rights, will appeal to their sense of justice alone to induce them to let us alo When the millennium shall come—when all men shall divest themsel of selfishness and only seek to promote the happiness and well bein all other men—then will the world be prepared for this exalted stat human happiness and human society.

Now, I was born and brought up in a society of Christians who h to this doctrine of universal peace. The Friends believed that reign of universal peace and good will among men had already arriv when by turning the other cheek the right could triumph, or, if it not at the instant, a blessing would follow the pain and that a hig power would intervene and protect the right. But in the country trict school, where most of the boys had not been taught this subli theory of peace, I found that I had to turn the other cheek more quently than was agreeable to me, and I was constrained, as I thoug to strike out for myself, and with more satisfactory results.

And should we, as a nation, adopt the peace policy suggested, I thi it would not be very long before our people would deem it wise to back to the old policy, "In time of peace prepare for war." So long we live in this wicked world and constitute a part of a family of nati who are more selfish in the aggregate than in their individual cap ties we can not afford to abandon the policy of selfishness, by which the other members are actuated, by leading the way in the peace pol to the extent of reducing ourselves to imbecility. I am happy to that I think I see evidence that there is more disposition among natic to the adoption of this peace policy in later years than ever before, a I would do everything to promote it which I could short of impoten which at this time would but invite aggression; but this I would not but in time of peace would prepare for war, which I think is the b means for insuring peace.

If the acquisition of these islands will tend to promote our secur by the protection of our commerce upon the Pacific Ocean, then it

r our interest as a nation that we should have them under our control, ıd I think few who have studied the subject will deny that.

These islands are nearer to our territory than to that of any other ıtion; the next nearest land to the islands is Tahiti; which was prac- ıally wrested from another people about as far advanced in civiliza- ɔn as are the descendants of the original inhabitants of the Hawaiian lands. France took possession of these islands practically by force arms and not by the gift or voluntary offer of the inhabitants, but ıply because she had the power and wanted them. She wanted them ıply because she thought it would promote her selfish interests. ıe had no contiguous possessions, she coveted the islands not for their oducts, but as a means of protecting her commerce in that ocean. nd so have the other nations of Europe been in the constant habit of izing upon the islands in that great ocean—always by force and never r the invitation or even by the consent of their inhabitants. All have ɛemed it wise policy to possess themselves of such islands, the moving stification to which has been commercial protection and commercial ɛcessity.

There are but few good harbors on the islands of Hawaii; two on the land of Oahu—Honolulu and Pearl Harbor—and one on the island of awaii, the harbor of Hilo. These alone invite commerce. The most ıportant and valuable of these is the first named. It is approached y a long and tortuous channel, yet its approach is easy under the irection of a competent pilot. The harbor itself is land locked. It is ırge enough to accommodate a great commerce, and is said by com- etent engineers to be absolutely defensible. Just back of the town, hich is situated directly upon the harbor, is the crater of an extinct olcano called "Punch Bowl," which rises 500 feet above the bay and ɔwn. It is so precipitous in front that it is ascended by the pedestrian ith great difficulty, but it may be approached at its rear by the eques- ian. It may be easily made entirely defensible in the rear as well as the front, so say the military engineers. The crater itself has been lled up in the course of time, so that it is now sunk not many feet ɛlow the rim by which it is surrounded. Even the layman can not ok upon this place without readily appreciating that the engineer ɛclares the truth when he says the place is absolutely defensible. commands not only the harbor and its approach, but the ocean ɛyond as far as shot can be thrown.

Diamond Head, too, which is at the western extremity of the channel ɛtween Oahu and Molokai, which is the next island to the windward, a commanding point scarcely less defensible and commands the annel between the two islands and the sea far to the westward.

By reason of its rocky shoals, this capital island can not be approached th anything but the lightest vessels, and this is true of all the islands the group, with a few rare exceptions. It would be hard to find ıother place on the globe of any importance so difficult to approach sea and so defensible. For a national possession the value of this oup of islands can not be exaggerated; but the islands are not only sirable in a commercial point of view, but as a pleasure resort and as sanitarium they are inviting. They are probably the healthiest part earth now inhabited. When discovered by Cook, in 1778, the old habitants claimed that no person ever died of disease on the islands, t only from old age or violence. There were at that time no pests own there, and even now there are no snakes, toads, or frogs found ɛre. No mosquitos, lice, gnats, or fleas, or any pests of that kind were ɛr known upon the islands till they were imported.

I took some pains to gather up the vital statistics in the islands w I was there in 1888, so far as the white people were concerned, and lished the results in the Examiner, a medical journal in Chicago, of J 1889, and the result was so startling that my veracity was questi until the truth of my statements was absolutely verified by documen evidence. For instance, the death of a white child in Honolulu du the seven years previous to 1888 represented over four hundred yea juvenile life in the Sunday school of the Fort Street Church, and death of an adult in the same church during the same time represe over one hundred years of adult life.* The first white child born in islands was in 1820, and the records of all the missionary famili the islands up to 1852 showed that over 86 per cent of those between those dates were still living, and many of those who had had died in foreign countries or by accident.

The inquiry will at once arise, how, if that is such a healthy coun the native population dwindled from 400,000 to 45,000 within a si century? The explanation is manifest. For untold generations most feeble lived and propagated their species as well as the str and when the whites came and brought with them the diseases of ci zation, both reputable and disreputable, the natives lacked the stan to resist them; whereas the whites who had come from the tempe zone, where constant fluctuations of climate render it the most unhea in the world, to say nothing of its multifarious diseases, which h through ages swept off the feeble and left only the most hardy robust to propagate the species, and their offspring inherited a capa to resist disease, and when such constitutions went to a climat healthy the effect was manifest in a longer lease of life.

The inquiry may be made, if these facts be so, why has this already become the great sanitarium of the world, especially for pe of the United States, who are so near by? The answer is obvious. is because of the character of the Government; there are not accom dations there to invite visitors. With a stable government cap would flow in at once and abundant accommodations would be built not only for invalids, but for pleasure seekers also, and great num of temporary visitors would seek those shores; but beyond this, cap would seek those islands for business enterprises, and in an incred short time they would become rich and prosperous, and it would no long before the population would exceed in number the natives occupied the islands when they were first discovered.

Judge Cooley assumes that all the whites now upon the islands foreigners, and have obtruded themselves unbidden upon the nati This is an unjust assumption.

A very large proportion of the whites now in the islands are nati and may as well claim the right of nativity as the descendants of original population, and the present immigrants, who have bec legally naturalized and so qualified to hold office, are entitled to same rights and privileges as are our own naturalized citizens. Thurston, the present representative of that Government, now here, born in the islands, as was his father before him, and the only object

* In his septennial sermon Dr. Frear stated that but six deaths had occurred am the attendants of his Sunday school during the last seven years, and one of t was by drowning, and the records of the school showed that the average attend had been three hundred. As each scholar represented a year of juvenile life a ally, by multiplying the three hundred by seven it becomes plain that the scho seven years represented two thousand one hundred years of juvenile life. Di this by the five deaths from disease, we see that there had been but one death every four hundred years of juvenile life during that time.

that can be urged against his citizenship there is his white lineage and that he is a man of learning, ability, and integrity and is seeking to promote the welfare and the happiness of all his countrymen. And the same may be said of the present chief justice of the islands, who is a son of the eminent missionary, Dr. Judd. He, with a large family of brothers and sisters, was born upon the islands and received his education in this country in our most eminent institutions, both academic and legal, and is justly entitled to the appellation of an eminent jurist, as will be seen by anyone familiar with the reports of the supreme court of that Kingdom.

Are these gentlemen, and many other white natives of the islands scarcely less distinguished, to be treated and considered as interloping foreigners who have intruded themselves upon the islands and have now overturned their Government and are seeking to give it away, to the injury of its inhabitants?

I will vindicate the fairness of Judge Cooley's intention by the assertion that if he understood the facts he would not attempt to brand these men as intrusive foreigners. If he would place the naturalized citizens of that country on a lower plane of right than the native born, we may infer that he would do the same with our naturalized citizens here.

All the Hawaiian Islands are of volcanic origin, and it is plainly seen that the first which emerged from the water is the island of Kauai, which was the first discovered by Cook and is the most northwesterly or leeward of the group, and the emergence was thence successively to the windward, and the last to emerge was Hawaii, which is the largest; indeed, it contains more area than all the others put together. They consist almost entirely of lava, and contain but very little tufa; the soil is necessarily, therefore, decomposed lava. The decomposition of lava is a very slow process and is not now complete, even in the oldest island. Decomposed lava constitutes the strongest soil to be met with and has the appearance and consistency of stiff clay, and when worked properly becomes friable and readily yields to the influence of human industry, and the amount of vegetation which springs from it is almost incredible. The produce of tropical and subtropical vegetation is of great variety and quantity.

The products of the islands are not confined to sugar alone, by any means; but a great variety of fruits, grasses, and cereals grow with equal luxuriance. Bananas and pineapples, particularly, are grown and exported, and both the soil and the climate are especially adapted to the growth of the orange. Oranges are not grown and cultivated to any considerable extent, but grow wild in the ravines and uncultivated places, and yet are of the best quality. The natives gather them from these wild trees and bring them into the towns when found growing near by. At Hilo I often obtained them in this way at the rate of 25 cents for 2 dozen, and found them very sweet and delicious; indeed, they would compare favorably with the best quality of cultivated oranges I have met in other countries.

Kalo or taro grows there in the highest perfection, and it is claimed and admitted that an acre of taro or kalo will produce more sustenance to man than an acre of any other vegetable known. But to enumerate all the products of the soil which these islands are capable of producing would fill a book of itself, so I will mention but one other product, which we should add to those we already possess, and that is coffee, for the growth of which both the soil and climate are remarkably adapted. The Kona coffee, which is the name by which the Hawaiian coffee is

known, is of a better quality than any which finds its way into our markets, and is only surpassed by that which is produced on one of the Dutch East India Islands, and is known as Minneha and said to be translucent. This never finds its way into the markets, but is all taken up by the wealthy burgomasters in Holland.

I ask whether it would not be advantageous to this country by establishing a stable government, to open the doors of such promise to American enterprise for the admission of our people, to go in and by their enterprise and industry to utilize for the benefit of themselves in particular and mankind in general all these great possibilities? It has long been the boast of our country that we can raise on our own soil a greater variety of products required for human sustenance and human comfort than almost any other country in the world. If this be an element of advantage to the nation, then it would be advantageous to add to this.

If the learned jurist who thinks that to annex those islands to our country and thus acquire control of them would be burdensome rather than helpful to us, would go and see for himself and thus be enabled to comprehend the subject in all its bearings, I think he would appreciate the advantage of such an acquisition, and would not fear the burden. No human genius is capable of forming correct conclusions upon subjects of which he is in fact ignorant, or of which, at best, he has but very partial information. He would not attempt to do this in relation to any question arising in connection with his own profession, of which he is so able and so brilliant a member. If we would all bow down before him in reverence when he expresses his opinion upon a question of law, of which his knowledge is so profound, it does not necessarily follow that we should have the same regard for his opinions on subjects of which he is not so well informed.

For myself, when I contemplate the future of our country, and consider it in connection with the present and the past, I can not hesitate to say that it is a matter of the highest importance to our well-being in the time to come that we accept the proffered gift of these islands and receive them under our governmental jurisdiction. Is there another nation in the world which would hesitate to accept such an offer? Yet there is not another nation to whom this acquisition would be of a tenth part the value that it would be to the United States. If such be the judgment of all other nations, may we not learn a lesson from them? Shall we assume that we know it all, and that they have been acting under a delusion in pursuing a policy under which they have grown to such greatness and prosperity?

It has been said that our form of government is not adapted to expansion, and will not permit us to grow to greatness. If when we acquired Louisiana many able and sagacious men feared this, and for that reason opposed the acquisition, subsequent results have demonstrated their error and have shown that the same conditions which have made other nations great and prosperous are making this nation great and prosperous also, and in a vastly augmented ratio as compared with other nations.

If any would question the means by which our acquisitions have been obtained, we may proudly answer, that with one exception, the means have been less questionable, even according to the standard of morality as it exists between man and man, than have been observed by other nations. All have been obtained by voluntary purchase without any pressure or constraint, as voluntarily as obtains between man and man when they make bargains, save one, that of Mexico.

Let us look over this acquired territory and consider the inhabitants before the acquisitions and look at them now, and compare their present conditions with what they would be but for the changes of government. We are certainly justified in the conclusion that had they remained under their old conditions of government, they would have continued under the old physical conditions which had prevailed for so many years without much progress. It is sufficient simply to allude to the subject to enable every intelligent and enlightened mind of this or any other country to appreciate what benefits have been conferred upon mankind in general, to say nothing of our own country. I, for one, believe that these great results have been brought about under the guidance of Divine Providence, whose we all are, and whose undoubted right it is so to use us all as to advance His own glory and to promote the best interests of His creatures, both temporal and spiritual, which is at least one great object of His supreme government.

If I am right in my conclusions that it is for the interests of the United States that the Hawaiian Islands be added to our territory and thus brought under the governmental control of our Constitution, I next propose to consider whether this may be done justly and honorably on our part.

I think I have already shown that those islands may be annexed under the authority conferred by the Constitution of the United States. I have also attempted to show that the welfare of the United States would be promoted by such acquisition, as well as of the inhabitants of the islands. And now I will, in conclusion, attempt to show that this may be done consistently with the usage of nations, and therefore consistently with the law of nations, and so honorably and justly.

All the great nations of Europe have attained their present greatness largely by the acquisition of new territory. With very rare exceptions, this new territory has been acquired by force—by violence. For examples of this we may confine ourselves to modern times—that is, since what are termed the dark ages, when violence and war were the rule which absorbed the thoughts and ambition of the ablest of mankind. Since the dark pall which shrouded the most enlightened and capable countries of the world for so many years was lifted, and a brighter light shone in upon them, the rights of nations and of individuals have received some recognition. If the horrors of war have been ameliorated, they have not been abolished. If force and violence have been less justified among individuals because it was possible to restrain them by government, they have not been done away with among nations.

Among the great peoples of the world abroad the thoughts and preparations for war are now cherished on a greater scale than ever before. These preparations contemplate the taking of something from one nation by another by violence, and not by right or purchase or any other peaceful mode. One government thinks that a particular acquisition is necessary for, or would promote, its own interests without regard to the interests of another, and this it will do without considering the question of abstract right or wrong, but simply the question of desirability and its power to take. As a flagrant example of this, I may simply refer to the case of Prussia and Denmark, where the conquest and annexation were not confined to savage peoples, but where the conquered were as enlightened and civilized as the conquerers; and I may also refer to the partition of Poland. Do not understand me as approving of these instances of violent transfer of sovereignty without provocation in modern times, for I do not approve of them.

The despoiled were as highly civilized as the despoilers, so there was not the excuse that the territory wrested from the rightful and long-recognized owners was taken from savage people for the advantage of civilization. Nor was it done with the consent of the peoples of the countries thus violently seized; nor was it done in the prosecution of a war just or unjust; but for the mere purpose of conquest and territorial aggrandizement. I offer these instances, occurring in the nineteenth century, to emphasize the fact that the world does not look to its nations for the benevolence and scrupulous conscientiousness exacted from individuals. If the moral sense of mankind has discredited the maxim that "the end justifies the means," among individuals, it would seem that that maxim still obtains among nations, even the most civilized.

If it be claimed that we have erected a higher standard of national morality than prevails in other countries and that hence we are not burdened with great standing armies, I may suggest that it is not our higher moral standard that exempts us from this necessity, but other causes, principal among which may be cited our isolated position. If it be supposed that we are more peaceably inclined than other nations, because of a less martial spirit among the people, late events have certainly contradicted this conclusion, and it is from the reverse of this that we may suppose that we need not, like other nations, continue every day in immediate preparation for war. If we are not as well prepared to repel immediate invasion we ourselves believe that we could prepare for war on a large scale in so short a time that the loss would be comparatively small and not equivalent to the cost of maintaining a standing army, ever ready to repel the most formidable invader.

It is obvious that the instances of violent spoliation which I have mentioned present a broad contrast with the case we are considering. The point I am seeking to establish, that morality or ethics existing among nations in their bearing toward each other or their respect or the rights of each is different from that which prevails among individuals, is as well illustrated in our own history as in that of any other country. By what rights do we claim to own the soil or the sovereignty which we occupy as a nation? Stripped of all casuistry, we acquired our only title from the aborigines by force and violence or by fraud, and so are we still acquiring title to more soil here, the right to govern which we assert because we are strong enough to maintain that assertion. He who would deny this only asserts his ignorance of the history of our country. I do not refer to this to condemn—on the contrary, I justify it—but only on the ground of necessity.

We were compelled to do this in order to build up a great nation, and we are still compelled to do it in order to strengthen and expand that nation. The interests of mankind in general, and of our own people in particular, required this. By this means a few savages, who were doing nothing to advance the interests of mankind in general and very little for themselves in particular, were displaced to make room for fifty times their number, who, by the exercise of civilized habits, could contribute to the welfare of the human race, and so the better advance the honor and glory of Him whose tenants we all are, and who has an undoubted right to dispose of us as to Him shall seem best in His own good time. Let those of our people who would come and criticise our motives and actions as a nation turn their attention to the mode in which we have acquired what we already have before they object to the mode in which it is proposed to acquire this extension of our dominion.

To be consistent they must insist that we shall return to those from

'hom we have wrested all we have thus acquired, while they object to ur further acquisition of that which is equally necessary to our national 'elfare, at least relatively, which is the point which I have previously onsidered. If this acquisition is not desirable that should end the iscussion, without considering the mode of acquisition.

The American missionaries arrived in those islands in 1820 and exerted hemselves with great success in the enlightenment and civilization of he natives, and, principally under their influence, a constitution was ormed in 1840, and they were admitted as an independent kingdom into he family of nations. By this constitution foreigners were invited to ome in and become naturalized citizens, on which invitation many white mmigrants, mostly from the United States, arrived there, were naturalized, and took part in the government of the country in harmony with the native whites and colored inhabitants. Upon the death of Lunalilo the first royal line became extinct.

The constitution provided that the reigning monarch might appoint his successor, but if he omitted to do so then the new king should be elected by joint ballot of the Legislature, and under this provision of the constitution Kalakaua was elected king. Before his death he appointed his sister, Mrs. Dominis, whose husband was an American of that name, as his successor, and she was crowned under the title of Liliuokalani. She soon showed a disposition to set aside the restraints of the constitution and to govern by her own arbitrary will, and was about to proclaim a constitution which would deprive the whites of a right to participate in the government, but would place it entirely in the hands of the colored natives. Upon the discovery of this plot, which if carried into execution would have wrought the ruin of the whites in the islands, as a measure of self-preservation they formed a provisional government, dethroned the queen, and have since carried on the government of the islands in a peaceable and satisfactory manner.

This government de facto—a government whose acts, so far as the public or third persons are concerned, are as obligatory as are the acts of a government de jure, and was recognized by all foreign nations having their representatives on the islands—offered the islands to the United States for annexation, and the question now is, primarily, Is it for the interests of the United States to accept the proffered gift? and secondarily, Would it be for the interests of the inhabitants of those islands that we should take them under our government and protection? I have already attempted to show that the interests of the United States would be promoted by such annexation, and I think every capable man who will calmly contemplate the condition of affairs in those islands as they would exist in case we should repel their advances, and especially if the present Government should be overthrown and anarchy be allowed to prevail, and then contemplate the state of things as they would exist in case they were annexed to this country, he could not hesitate to say which state of things would be the most desirable—which would best promote the prosperity of the islands and the happiness of the people resident there.

The whites born in the islands are as much native there as the descendants of those who lived there a hundred years ago, and the only difference which we should recognize among them all is not a difference of color or of lineage, but of capacity and worth. Drive the whites out of the islands, both native born and immigrants, and place the Government in the hands of the natives alone, and contemplate the picture. All civilization would shudder at the thought. Were

such a state of things brought about, those who are responsible for it would not be happy, nor would mankind hold them in grateful remembrance. They could hardly expect to receive from posterity a legacy of blessings.

I, for one, feel a measure of pride that the first vote I ever cast was for General Jackson, and that I have ever since acted with the Democratic party, and that I contributed my little mite to the election as President of the United States of Grover Cleveland, whose fond admirer I have ever been since he became known as a public man. I proudly retrace the history of the Democratic party, and remember with satisfaction its record in connection with the acquisition of new territory.

It was under Democratic auspices that we acquired Louisiana, Florida, Texas, New Mexico, Arizona, Utah, and California—indeed, all our acquisitions have been under Democratic Administrations, except Alaska. Are all our traditions to be thrown away in the face of the prosperity which has flowed from our acquisitions in the past and which has come to us by pursuing our cherished policy? Is it true that we have suddenly become a milk-and-water party, as some have asserted, or do we still retain some of the old Jackson spirit, of which his contemporaries felt so proud? Since when has this radical change been made in the principles and policy of the party founded by Jefferson, who first gave practical illustration of its workings and which have ever since been adhered to with unswerving fidelity to the greatest glory and advantage to the country? And what event has wrought this change indicating so great a weakness in the energies of the party? For myself, I will not admit that. No; I do not believe it. I do not fear what answer will come either from the old Democrat or the young Democracy. As much as I love my party, I love my country more, and while I have a voice to raise I will raise that voice for what I believe to be the best interests of this nation.

Do not understand me as claiming for my party all the benefits which have flowed from the acquisitions which have been made under its auspices. We may justly admit that the opportunities for those acquisitions, with one exception, when the Democratic party was in power were accidental, and that their political opponents gave those great measures hearty support. Yet it is certain that the party in power had the wisdom and patriotism to embrace the opportunities, and thus merit the meed of praise to which all those who have rendered great services to their country are justly entitled, to whatever political party they may have belonged. So it is in fact that neither party may justly claim the exclusive credit of these great acquisitions, but let us divide the merit to all our countrymen, of whatever party, who helped to secure them. If the opportunities happened to arrive when the destinies of the Government were in our hands, we may have the satisfaction of saying that we did not spurn and trample them under foot, but wisely embraced them, and as Americans we may say, in this we were cordially supported by the great body of our political opponents.

If, unhappily, the present opportunity should be thrown away and the present offer rejected, and some other nation should feel bound in the cause of human prosperity to step in and take the prize which is now laid at our feet, the time is not far distant when all our people will appreciate that these islands are absolutely necessary for a safe and stable commerce on the Pacific Ocean, and when that time comes we shall acquire and hold them at whatever cost of blood and treasure

necessary to accomplish that end. What then will be the future estimate of widows and orphans who will then be prostrated in grief and sorrow of the memories of those who have compelled their sacrifice by their present action?

But I repeat that I do not believe that this will ever come to pass—that such is the intention of those on whom the responsibility of present action is imposed. I earnestly hope that they do not really intend to let the present opportunity pass by unimproved, but that their course hitherto merely means that they think it would look better in the eyes of the world to proceed with more deliberation to the accomplishment of the same great end. I would not urge this as a party measure, but as an American measure, which will benefit all the people alike. It is too important for national interests to be bandied about as a party enterprise when it so vitally affects the whole people, every one of whom I would hope to see supporting it so soon as they understand it in all its bearings.

Let me recapitulate for a moment:

I have shown, I think conclusively, first, that it is within the constitutional power of the Government to annex these islands; second, that the best interests of the United States and of Hawaii require that they should be annexed; and, third, that it may be done consistently with the strictest rule of national ethics, as practiced and maintained by all the civilized nations of the world.

JOHN DEAN CATON.

O

55TH CONGRESS, 2d Session. } SENATE. { DOCUMENT No. 215.

POSTAL SAVINGS BANKS.

MARCH 30, 1898.—Ordered to be printed.

Mr. WOLCOTT presented the following

COPY OF CORRESPONDENCE BETWEEN HIMSELF, AS CHAIRMAN OF THE COMMITTEE ON POST-OFFICES AND POST-ROADS, AND THE SECRETARY OF THE TREASURY UPON THE GENERAL SUBJECT OF POSTAL SAVINGS BANKS.

MARCH 10, 1898.

DEAR SIR: I beg to inclose herewith copies of bills which have been referred to this committee upon the subject of postal savings banks. The committee will appreciate it if you will, at your earliest convenience, give them your ideas respecting the bills and any suggestions which you may have to make upon the general subject of postal savings banks.

Respectfully,

E. O. WOLCOTT,
Chairman.

Hon. LYMAN J. GAGE,
Secretary of the Treasury.

TREASURY DEPARTMENT,
OFFICE OF THE SECRETARY,
Washington, D. C., March 23, 1898.

SIR: I have the honor to acknowledge your communication of the 10th instant, inclosing copies of bills upon the subject of postal savings banks and suggesting that I give you my ideas respecting the bills and any suggestions which I may have to make upon the general subject of postal savings banks. The subject is a most important one, involving very grave considerations as to the proper functions of government, its ability to manage, through existing agencies or others that might be created, a great fiduciary trust of the kind contemplated.

On the other hand can be urged the interests of the great body of people whose welfare might be deeply promoted through a postal savings bank system, if such a system should be inaugurated. It is not my purpose to enter into a debate on either side of the question. It has no doubt had a full presentation from both sides in your committee, and if the bill is reported to Congress it will there receive exhaustive consideration.

In view of the fact that such a measure is recommended by the Postmaster-General, I have had naturally a sense of delicacy in traversing

ground which he has already covered, or criticising measures which he has officially recommended.

Learning, however, of your action in submitting these proposed measures to my consideration, he has urged me to speak with frankness in response to your communication.

In looking over the various bills as carefully as I could under many interruptions from other official duties, it appears to me that if any bill were to be recommended, bill 2369, with such amendments as have been proposed by the Postmaster-General himself, is fairly adequate to meet the purposes it is sought to cover. The only suggestion I have to make in the way of amendment would be to strike out the first seven lines in section 14, on page 9 of S. 2369.

In offering some general reflections upon the subject, which I avail myself of your liberty to do, the suggestions I make are to be construed as relating to the proper time for authorizing the creation of a postal savings system, and not as any opposition to the proposition itself. Whatever may be the determination of the merits of the question, action looking to establishment of the system should be delayed until certain contemporaneous or previous questions shall be settled.

The first of these in importance is the money standard which is to measure in the future the value of the fund to the depositors. In undertaking a great fiduciary trust like the one proposed, a great and powerful nation will enter into contract relations with many thousands of the most humble units composing, in part, the national life. The whole proposition rests upon the theory that these persons would find in the arrangement proposed a guardian whose justice and fidelity could not be questioned, and thus their savings, the fruits of self-denial and industry, be kept effective for their future needs.

In dealing with the young, the unskilled, the dependent, the strong and powerful, entering into contract relations with such, are under the highest obligations to make the contract so plain that the simplest can understand it, and yet I discover nowhere in any of these bills any agreement or pledge as to the form of money in which depositors are to be paid. This would not be a necessity if, in the body of the general laws, or through long and settled usage, having substantially the force of law, this question were universally understood, but manifestly this is not the present situation.

If one of the humble parties to the proposed contract should ask the postmaster agent to whom he should hand his accumulated earnings, now as good as gold, "Will my money, when I draw it out, be in gold, or in its fair equivalent?" what answer will you authorize your agent to make? At present he can make no specific answer. He can point to the current fact that the Government is now paying gold or its equivalent. He can point out clauses in certain acts of Congress which declare the policy of the Government to be the maintenance of a parity between silver and gold.

In short, he can show that if these acts remain unrepealed, and if the discretionary power accorded to the President and Secretary of the Treasury under the laws is exercised in one direction, they will be paid in as good money as they part with. But if, on the contrary, this discretionary power be exercised in a contrary direction, they may be paid in a money of a much lower commercial value.

I respectfully submit that such ambiguity, attended with unforeseen contingencies in government administration, does not form a safe or proper basis for the contract relation contemplated. When this element of uncertainty shall be removed, when the standard of payment can be

early defined and permanently settled, whether that standard be gold : silver, then the savings of the humble classes may be, with their onsent, taken over by the Government on terms clearly and plainly ated. In my opinion it can not, with proper regard to national dignity nd a due regard to the trustful public, be done before.

Second. It is best to avoid, if possible, the imposition upon officers of he Government, whose tenure of office is brief, duties so delicate as the nvestment of large sums of money in either municipal, corporate, or anded securities. If the accumulated deposits, which would no doubt esult from the enactment of the law in question, could be invested in Jnited States bonds the matter would be much simplified. At the resent time, however, the outstanding public debt is not under our ontrol, and no public necessity now appears for increasing that debt.

Third. A postal savings bank system, if adopted, ought to be conurrent with, or closely follow after, a general reform in our banking nd currency system. The two ideas should have wise reference to ach other. A banking and currency bill has been prepared by a subommittee of the Banking and Currency Committee of the House of Representatives.

Without here offering any argument for or against that bill, I note he fact that under it the way could be easily opened to bring under he control of the public Treasury for payment and cancellation a large mount of the United States bonds now held by the national banks, nd thus a means provided for at least a partial absorption of the ostal savings fund.

I note further, that in five years after January next, $100,000,000 of utstanding bonds will mature and become payable, and that three ears afterwards some $600,000,000 more will also thus mature. With ur banking and currency system established on more scientific founa tions; with our money standard taken out of the field of political ebate, with its accompanying uncertainties; with a postal savings act et in operation in timely reference to controlling the fund so as to etire a part or all of the present public debt, the experiment of postal avings banks could be inaugurated under conditions favorable to the est results for all concerned.

Believing, as I do, that the general proposition is strongly supported y public opinion which will meet with final recognition in Congress, I et believe it to be for the interest of the measure that it be held in beyance until a more seasonable period for its inauguration.

L. J. GAGE, *Secretary.*

Hon. E. O. WOLCOTT,
Chairman Committee on Post-Offices and Post-Roads,
United States Senate.

UNITED STATES SENATE,
COMMITTEE ON POST-OFFICES AND POST-ROAD ,
Washington, D. C., March 30, 1898.

SIR: Your communication of the 23d instant, addressed to me as airman of the Committee on Post-Offices and Post-Roads, was duly ceived.

At a meeting of the committee held this morning, at which there was full attendance, the committee unanimously directed me to return the ommunication to you and to say that it must decline to receive the letr and that the committee deems it to be not responsive to my letter,

as chairman of the Committee on Post-Offices and Post-Roads, to you of March 10, 1898, to which it purports to be an answer.

The attention of the committee was also called to the fact that your letter was communicated to the public press and published before it had been received by the committee.

Respectfully,

EDWD. O. WOLCOTT,
Chairman.

Hon. LYMAN J. GAGE,
Secretary of the Treasury.

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55TH CONGRESS, 2d Session. | SENATE. | DOCUMENT No. 216.

U. S. REVENUE CUTTER DANIEL MANNING.

LETTER

FROM

THE SECRETARY OF THE TREASURY,

TRANSMITTING,

IN RESPONSE TO RESOLUTION OF THE SENATE OF JANUARY 10, 1898, REPORT OF THE BOARD APPOINTED IN COMPLIANCE WITH SAID RESOLUTION TO INQUIRE INTO AND DETERMINE HOW MUCH THE HULL, MACHINERY, AND APPURTENANCES OF THE U. S. REVENUE CUTTER DANIEL MANNING COST THE CONTRACTORS OVER AND ABOVE THE CONTRACT PRICE.

MARCH 31, 1898.—Referred to the Committee on Naval Affairs and ordered to be printed.

TREASURY DEPARTMENT,
OFFICE OF THE SECRETARY,
Washington, D. C., March 30, 1898.

SIR: Respectfully referring to Senate resolution dated January 10, 1898, requesting the Secretary of the Treasury to organize a board of not less than three competent persons to inquire into and determine how much the hull, machinery, and appurtenances of the U. S. revenue cutter *Daniel Manning* cost the contractors over and above the contract price, if anything, and the facts and circumstances which led to such increased cost, and report the same to the Senate, I have the honor to transmit herewith the report of the board convened under said resolution, dated the 26th instant.

The cost account referred to in said report, under heading "B," is being copied at the Department and will be submitted in a few days.

Respectfully, yours,

L. J. GAGE, *Secretary.*

The PRESIDENT OF THE SENATE.

TREASURY DEPARTMENT,
OFFICE OF THE SECRETARY,
Washington, D. C., March 26, 1898.

SIR: The report of the board appointed by you to investigate the cost of the revenue-cutter *Manning* is herewith respectfully transmitted,

I have to state that this report was signed by the members of the board on Saturday, March 19, 1898.

The cost account, referred to in the report as "B," is at present being copied in the Department, and will be transmitted to you in a few days as a part of this report.

Respectfully, yours,

C. M. GREEN,
First Assistant Engineer,
Revenue-Cutter Service, President of Board.

The SECRETARY OF THE TREASURY.

NEW YORK CITY, *March 19, 1898.*

SIR: The board appointed by you (Department Orders, C. F. S., February 17, 1898), under the provisions of a resolution of the United States Senate, "for the purpose of inquiring into and determining how much the hull, machinery, and appurtenances of the United States revenue cutter *Daniel Manning* cost the contractors over and above the contract price, if anything, and the facts and circumstances which led to such increased cost," beg leave to say that following the instructions given we have, with the assistance of the appointed accountant, Mr. William C. Tyler, examined all of the *Daniel Manning* cost accounts of the Atlantic Works; have compared many of the items of cost with the original invoices for same; have determined the accuracy of the charges independent of the contractors' accounts; have questioned the officers of the contracting corporation, and as the result thereof have come to the following conclusions on the questions submitted:

(1) We find that the actual cost of the vessel when completed by the contractors, delivered to and accepted by the Government, was $297,726.34.

(2) That the contract price for the vessel was $159,951; that the extras allowed by the Department amounted to $3,902.90, making the total sum received by the contractors on account of this vessel $163,853.90, thus making the cost of vessel over and above amount received by contractors $133,872.44.

That the circumstances which led to such increased cost are—

(*a*) That the hull of the *Daniel Manning* was the first composite vessel of this class built for the Government, and therefore there was no previous experience or data as a guide for the contractors in making up their estimate. This fact also made it necessary for the contractors to proceed slowly and carefully with the work, thus causing delay and additional expense.

(*b*) That the rigid tests and inspection of materials specified by the Department and the rejection of materials under the tests caused great additional delays, thus making an incalculable addition to the cost. As illustrations of this difficulty our attention was drawn to the facts, that considerable time was lost awaiting the replacing of frame shapes; that six months elapsed before the crank shafts were completed and delivered; that thirteen cylinder castings were made to get the three required, and several of these cylinders were partly or wholly finished before being rejected, thus making a great delay and therefore a great additional cost.

(*c*) That the contractors made an error in judgment and clearly failed, in making up their estimate, to properly consider the quality of vessel specified by the Department, the *Daniel Manning* being in character,

lass, and quality fully equal to similar vessels built for the Navy Department.

(*d*) That the mechanics employed by the Atlantic Works work but nine hours per day instead of ten, as in other places, and that the wages paid in Boston exceed those of other places where similar vessels have been built.

Owing to the above-mentioned facts the actual cost of the vessel greatly exceeded the original estimate of the contractors, and was greater than the amount received from the Government by $133,872.44.

(3) That the cost of all work, extra of the specifications, performed by authority of the Department, amounted to $3,902.90.

(4) That the pecuniary obligations of the Government have been ompletely discharged under its contract with the Atlantic Works for he construction of the revenue cutter *Daniel Manning*.

We further submit herewith:

A. A full and detailed report of our proceedings, designated as minutes.

B. A copy of the entire cost accounts for the construction, completion, and delivery of the revenue cutter *Daniel Manning*, as found by he board to agree with the books and accounts of the Atlantic Works, ith our reductions; also our additions for "shop expenses."

C. An abstract of the various accounts, showing detailed cost of ull, machinery, and appurtenances.

As to the allowance in total cost for "shop expenses," we would say hat experience and precedent show that shop expenses amount to at east 20 per cent of the labor account, which latter in this case amounts o $142,013.36. Careful consideration of the whole subject led us to ake an allowance of 10 per cent of the labor account only, making n addition to the net cost determined by us of $14,201.34 for "shop xpenses."

All of which is respectfully submitted.

C. M. GREEN,
First Assistant Engineer, United States Revenue-Cutter Service, President of Board.

J. FEASTER,
Naval Constructor, United States Navy, First Member.

STEVENSON TAYLOR,
Secretary of Board, Second Member.

The SECRETARY OF THE TREASURY,
Washington, D. C.

MINUTES OF BOARD OF INQUIRY IN RE COST OF U. S. REVENUE STEAMER DANIEL MANNING.

THURSDAY, *March 3, 1898.*

Convened at Albemarle Hotel, New York City, 2 p. m., at call of President Green. r. Taylor requested to act as secretary.

Instructions issued to board were read and a general discussion followed as to the ope of inquiry and method of procedure in determining the costs required and asons therefor. Mr. Cox, of the Atlantic Works, being in the city, was called to e meeting and asked for information.

It was finally determined that Mr. Tyler, the official accountant for the board who had been by department orders examining accounts at the Atlantic Works r some weeks) be sent for; also that he be asked to bring to the board (Mr. Cox ving cordially given his consent) the cost book of the Atlantic Works and such her records as he may have made in connection with this matter, and be present ith same at 10 o'clock a. m. Saturday, March 5, to which time board adjourned.

SATURDAY, *March 5, 1898.*

Met this morning, Albemarle Hotel, New York City, 10 a. m. President Green and Mr. Taylor; also Mr. Tyler, accountant, present; Mr. Feaster absent.

The Atlantic Works cost book was taken up, and the rest of the day occupied in examining some of the accounts and some of Mr. Tyler's memoranda.

A large number of the items were noted and assigned to the individual members of the board for comparison and corroboration.

Adjourned until 10 a. m. Monday, March 7.

MONDAY, *March 7, 1898.*

Met this morning at the Albemarle Hotel, New York City, at 10 a. m. Full board present.

Examination of accounts continued for the day.

It was finally decided to get individually as much information as possible and to leave for Boston on Tuesday, March 8.

TUESDAY, *March 8, 1898.*

Spent in getting information and going to Boston.

WEDNESDAY, *March 9, 1898.*

Met at the Atlantic Works, East Boston, Mass., 10 a. m. Full board present. Examination of accounts continued for the day. Messrs. Cox and Boyd questioned as to costs and reasons for same.

THURSDAY, *March 10, 1898.*

Endeavored to get on board of the *Daniel Manning*. Found she had sailed the previous evening. Examined accounts at the Atlantic Works. Agreed to adjourn to meet in New York on Monday or Tuesday at call of the president, who was asked to go, in the meantime, to Washington for information required by the board.

TUESDAY, *March 15, 1898.*

Met this morning, 10 o'clock, at Albemarle Hotel, New York City. Full board present.

Further consideration of accounts occupied the day. Reports received from members of the board corroborating original invoices of the Atlantic Works.

Adjourned to 10 a. m. to-morrow.

WEDNESDAY, *March 16, 1898.*

Met this morning, 10 o'clock, at Albemarle Hotel, New York City. Mr. Taylor absent from morning session. Full board present in the afternoon.

The day occupied in further comparison of accounts and consideration of report.

THURSDAY, *March 17, 1898.*

Met this morning, 10 o'clock, at Albemarle Hotel, New York City. Full board present.

Day occupied in discussion of and preparation of reports, tables, etc.

FRIDAY, *March 18, 1898.*

Report of board adopted. Minutes of all meetings read and approved.

Adjourned to meet, if required, at call of the president.

STEVENSON TAYLOR, *Secretary.*

SATURDAY, *March 19, 1898.*

Report signed.
Approved.

C. M. GREEN,
First Assistant Engineer, Revenue-Cutter Service,
President of Board.

B.

NOTE.—The cost account referred to under B is at present being copied in the Department, and will be handed in as part of this report in a few days.

C. M. GREEN,
United States Revenue-Cutter Service, President of Board.

C.

Summary of net expenses of construction, U. S. revenue steamer Manning.

	Undivided.	Hull.	Engine, etc.	Boiler, etc.	Total.
eel	.....	$7,518.53	$482.81	$7,665.01	$15,666.35
	.....	5,476.39	1.26	801.62	6,279.27
s	.....	9,956.47	11,611.69	1,602.87	23,171.03
d nuts	.....	645.44	678.66	299.19	1,623.29
s	.....	292.82	4,821.17	210.72	5,324.71
and rubber	.....	254.50	596.81	58.66	909.97
nd oils	.....	2,095.12	58.84	13.71	2,167.67
instruments, and valves	.....	1,964.36	15,249.32	.....	17,213.68
	.....	51.54	1,284.99	1,788.55	3,125.08
	.....	1,010.94	6.00	409.06	1,426.00
stock	.....	333.00	1,561.97	50.04	1,945.01
pipes	.....	.....	8,238.73	.....	8,238.73
contract	.....	36,730.25	.....	.....	36,730.25
	.....	456.03	732.31	55.12	1,243.46
d fittings	.....	249.63	1,268.83	97.05	1,615.51
-light plant	.....	.....	4,902.80	.....	4,902.80
s and miscellaneous	3,325.40	2,203.90	2,874.52	1,525.01	9,928.83
tal	3,325.40	69,238.92	54,370.71	34,576.61	141,511.64
mechanics, smith, boiler, ship orkers, painters, riggers, draft-attern)	.....	85,372.20	32,885.89	23,755.27	142,013.36
tal	3,325.40	154,611.12	87,256.60	38,331.88	283,525.00
expenses	.....	.....	.....	.....	14,201.34
					297,726.34

oved:

C. M. GREEN, *President of Board.*

55TH CONGRESS, 2d Session. | SENATE. | DOCUMENT No. 217.

THE POST-OFFICE.

MARCH 31, 1898.—Ordered to be printed.

Mr. PETTIGREW presented the following paper:

THE POST-OFFICE—SHALL ITS BUSINESS BE TURNED OVER TO PRIVATE CORPORATIONS?

This is the issue involved in the proposition of Mr. Loud to cut down the free-delivery service of the country unless Senators and Representatives will vote for his bill to cut down the service of the Post-Office in the hauling of second-class matter. It is part and parcel of the conspiracy to emasculate the service of the Post-Office and to turn it over to Mr. Loud's friends, who, he told the Fifty-fourth Congress, could easily make a profit of thirty to forty millions a year out of it.

The situation was well stated by Senator Gorman, of Maryland, in his speech on "Railway mail compensation" last winter, when he said:

> The fact is, Mr. President, that the great power of these corporations who control everything, who are powerful enough to make and unmake public men, is so omnipotent that no executive officer has been found in the last twelve years, except in the single case of Postmaster-General Vilas, who has attempted to reduce the compensation for mail transportation, and within six months after he had left the Department every economy which he introduced had been wiped away and they received not only what they had received before, but their compensation was increased, and never, during his long service in this body—the United States Senate—[said the Senator] except in this one instance, did he know of a Postmaster-General who had made a bona fide effort to control this railroad extortion which everybody knows to exist.

Here is the cause of the deficiency in the revenues of the Post-Office. It is in this railroad extortion, which everybody knows to exist and which continues to exist, not as Senator Gorman would have it, because of some failure of duty on the part of a Postmaster-General, but because the majority of the Senators and Representatives in Congress deliberately make themselves parties to this extortion, are indeed the active agents in this crime against the people they are sworn to serve.

That, except for this extortion, the 1-cent-a-pound rate on second-class matter would prove a source of profit to the post-office is practically admitted by the chairman of the Postal Committee in his speech in the Fifty-fourth Congress when he said:

> The express companies to-day are carrying their matter, domicile to domicile, for a fraction under 1 cent a pound within a radius (within zones) of 500 miles.

I am able, moreover, to corroborate the truth of this statement of Mr. Loud by the following evidence: The Mississippi Valley Medical Association met at Louisville, Ky., October 4–8, 1897. On that occasion a special label was issued, marked "Magazines, prepaid, special

words, under this railroad decree we, our children, and our children's children to the third and fourth generation are to be saddled with the annual payment of $1,750,000 in gold on $50,000,000 in bonds that represent to their issuers only the cost of so many pieces of printed paper, and at the end of a hundred years our descendants are to be compelled at the point of the bayonet if necessary, to give up so much of their flesh and blood as may be requisite to transform these paper issues into solid gold.

The capital of the controlling railroad in this instance is $100,000,000.

The balance of the railroad stocks of the United States is something over $5,000,000,000. With a few more strokes of the imperial railway pen these $5,000,000,000 of railway stock will be transformed into $10,000,000,000 of bonds. The entire national railway system will then be pooled under one management, and the national debt of the United States will be brought up to a figure vastly higher than it was at the end of the civil war.

The total tax levied by our private railway managers on the people of the United States for the payment of dividends on the outstanding railroad stocks of the United States in 1896 was $87,603,371. Under the impending imperial régime this tax will be increased to $350,000,000 annually; this in solid gold, and it will be collected as rigidly and as mercilessly as were ever the taxes levied by the Emperor of Rome upon his subject provinces.

It is toward this goal that things are rapidly tending.

THE RAILWAYS AND THE PEOPLE—THE LAST STRAW UPON THE CAMEL'S BACK.

A few days ago our imperial railway government promulgated a decree pooling the Lake Shore Railroad in the New York Central and increasing the paper obligations of the nation to the said railroad government by the substitution of $100,000,000 of the Central's 3½ per cent hundred-year, paper-made, gold promising bonds for $50,000,000 of Lake Shore stock. In other words, under this railroad decree, we, our children and our children's children to the third and fourth generations are saddled with the annual payment of $1,750,000 in gold on $50,000,000 in bonds that represent to their issuers only the cost of so many pieces of printed paper, and at the end of a hundred years, our decendants are to be compelled, at the point of the bayonet, if necessary, to give up so much of their flesh and blood as may be requisite to tranform these papers issues into solid gold. It is the old story of Shylock, but on a modern scale.

And now comes the Hartford Courant of February 11, with the notice of another forthcoming decree, under which the Chicago and Northwestern, the Chicago, St. Paul, Minneapolis and Omaha, the Fremont, Elkhorn and Missouri Valley, and the Sioux City and Pacific roads are to be pooled in the New York Central, and, as I understand it, with a similar substitution of $2 in bonds for $1 in stock. In other words, some 6,000 miles more of railroad are to be brought under the direct control of the Central, and the national debt to the master of the Central is to be increased by some $132,000,000, all this by the mere stroke of the imperial pen.

The capital stock of the New York Central is $100,000,000.

The balance of the railway stock in the country is, in round numbers, about $5,000,000,000. It now seems clear that the entire railway system of the country is to be pooled as quickly as possible under the

management of the Central, and that these $5,000,000,000 of stock are to be transformed into $10,000,000,000 of Central bonds—3½ per cent bonds, payable in a hundred years. In other words, by the simple fiat of the master of the New York Central, the paper obligations of the nation are to be increased by $5,000,000,000, and the tax levied for the payment of railway dividends in 1896, $87,603,371, is to be increased to $350,000,000, or 3½ per cent on $10,000,000,000, plus such an addition thereto as may be needed to make up the dividends to be apportioned to the courtiers composed of the Central's stockholders. We may fairly estimate that the total increase in our taxes will be not less than $350,000,000 annually. These transport taxes, moreover, will be collected as rigidly and as mercilessly as were ever the taxes levied by the Emperor of Rome upon his subject provinces. Only the *common people*, however, are to be taxed. The nobles are to have the use of the national highways free. This is the goal toward which things are tending, and with lightning speed.

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Bay City; thence a channel 200 feet in width to the Saginaw Bay, with an increase of depth of the channel to 16 feet, said estimate to be based on the survey made pursuant to the river and harbor act of 1896.

In returning herewith the above-mentioned resolution of the Senate I have to state that the cost of securing a channel of the dimensions specified between the points named is estimated by Lieut. Col. G. J. Lydecker, Corps of Engineers, the local officer in charge of improvement of Saginaw River, to be $750,000 if the work is done under continuing contract, and he states that the cost by any other method will be much greater and wholly indefinite.

While the resolution referred to this office is not such as is required by the provisions of section 4 of the river and harbor act of June 3, 1896, which contemplates a concurrent resolution in such cases, it may be proper to remark that a concurrent resolution identical in language with this has passed the Senate and was received in the House from the Senate March 21 and referred to the Committee on Rivers and Harbors. (See Congressional Record, No. 73, pp. 3397 and 3398.)

Very respectfully, your obedient servant,

JOHN M. WILSON,
Brig. Gen., Chief of Engineers,
U. S. Army.

Hon. R. A. ALGER,
Secretary of War.

55TH CONGRESS, 2d Session. } SENATE. { DOCUMENT No. 219.

MAIL SERVICE.

MARCH 31, 1898.—Referred to the Committee on Post-Offices and Post-Roads and ordered to be printed.

Mr. STEWART presented the following

PETITION FROM CITIZENS OF NEVADA, PRAYING THAT CONGRESS "PROTECT OUR MAIL SERVICE."

In view of the fact that our local mail service has been dealt with almost exclusively by nonresidents of the State of Nevada for many years past, said nonresidents having bid in some 98 per cent of recent lettings for service for the next four years at such extremely low figures as to allow insufficient compensation to the parties that have to perform the service to enable them to render such service as our citizens are entitled to, and also such as the Post-Office Department intends us to receive.

For instance, we will take the State of Nevada, which at our present rate of pay (for services to be performed for the next four years) costs the United States Government for star-route service $95,056.16 per annum. Of this amount, $90,180.84 is being paid to the subcontractors, thus leaving the snug little sum of $4,875.32, or 5.11 per cent of the total sum paid by the Government, to be pocketed by the Eastern bidders principally, who have never even visited our State; and now, since said Eastern bidders see that our local citizens have been so foolish as to suffer this course of procedure heretofore, they have again stretched forth their daring sword and slashed our service from $95,056.16 per annum to $73,352.40, a cut of $21,703.76, or 22.07 per cent. And now these Eastern gentlemen have the audacity to advertise for bids to perform this service. Recent communications with them show that they are offering to relet this service at a profit to themselves of from 15 to 35 per cent of their bid, upon which said contracts have recently been awarded them, and in view of these facts, realizing that we can not receive such service as our Post-Office Department has advertised for and intends us to receive, and which we can not receive at any such compensation as these contractors offer, we, the undersigned, business men, mail carriers, and citizens, do pledge ourselves to demand from said nonresident bidders for the performance of said mail service from July 1, 1898, to July 1, 1902 (according to Post-Office Department advertisement of September 15, 1897), such compensation as the United States Government is now paying for such service, and we denounce, discourage, and refuse to aid or assist any party or parties who may undertake to perform said service on any routes in the State of Nevada for less than such compensation as above stated, as we know the effect of this system has had a tendency to drive off good coaches from the

mail routes, and buckboards have taken their places, and now in turn these buckboards will be forced off in favor of horseback riders.

The means of travel are entirely taken away from the public. Points can not be reached without hiring private rigs, which has a tendency to keep people out of all places, and the interests of the country are directly sacrificed in the interest of cheapness in carrying the mails. The men who are induced to take subcontracts can not live at the business. They struggle along as best they can, and in a great many instances they are obliged to quit in debt. The people who furnish them grain, merchandise, and other supplies are also involved, as these underpaid people in many cases can not meet their obligations. This is not the fault of the Post-Office Department, as it is obliged by law to let the work to lowest bidders. It is the fault of the law and the speculator. The latter depends solely upon using the poor men along the routes as tools to enable them to make a good profit on each contract. Everybody loses by this system. The subcontractor loses; the people along the roads, in too many instances, lose, and the public suffers from poor service. The mail service is bad and the means of travel are curtailed, to the great damage of the entire section. The Government should get away from a system that is discreditable to it and injurious to the people. We earnestly believe the only way to receive good mail service is to have this great wrong made right, and in order to protect our own interests we hereby agree to use every effort to advance our mail facilities, and to accomplish this end we hereby pledge ourselves to the above resolutions.

F. T. BLUNDELL.
M. P. LARIOS.
CHAS. DOHERTY.
A. B. WALLER, Jr.
R. T. RUTHERFORD.
G. W. PRATT.
C. S. TREMEWAN.
Mrs. E. TREMEWAN.
R. G. GILL.
CHAS. HANKS.
R. R. MORSE.
W. E. JOHNSON.
BENJ. JOHNSON.
N. R. PETERSON.
M. C. MORSE.
GEO. E. BLUNDELL.
M. J. BLUNDELL.
ED. BLUNDELL.
ENNIS ESQUER.
A. M. MCAFEE.
JAS. E. PENROD.
JOHN E. ERIKSON.
EMERY JOHNSON.
M. SHEARER.
F. J. HOLLAND.
BARNEY BLOCKHUE.
JOHN H. HOLLAND.
G. R. HOLLAND.
J. H. WEILAND.
M. J. KEITH.
L. M. WEILAND.
HUGH JONES.
A. W. SEWELL.
C. S. WEILAND.
SETH M. SHEARER.
J. E. SHEARER.
D. SHEARER,
Postmaster, North Fork, Elko County, Nev.

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55TH CONGRESS, 2d Session. } SENATE. { DOCUMENT No. 220.

CARE AND PRESERVATION OF MONUMENTS, ETC., AT ANTIETAM BATTLEFIELD.

LETTER

FROM

THE SECRETARY OF THE TREASURY,

TRANSMITTING

COPY OF A COMMUNICATION FROM THE SECRETARY OF WAR SUBMITTING AN ESTIMATE OF APPROPRIATION FOR CARE AND PRESERVATION OF MONUMENTS, TABLETS, ROADS, ETC., AT THE ANTIETAM BATTLEFIELD.

APRIL 1, 1898.—Referred to the Committee on Appropriations and ordered to be printed.

TREASURY DEPARTMENT,
OFFICE OF THE SECRETARY,
Washington, D. C., March 31, 1898.

SIR: I have the honor to transmit herewith, for the consideration of Congress, copy of a communication from the Secretary of War, of the 30th instant, submitting an estimate of appropriation for care and preservation of monuments, tablets, roads, etc., at the Antietam battlefield, $3,000.

Respectfully, yours,

L. J. GAGE,
Secretary.

The PRESIDENT OF THE SENATE.

WAR DEPARTMENT,
Washington, D. C., March 30, 1898.

SIR: I have the honor to forward herewith, for transmission to Congress, estimate ($3,000) of appropriation for "Battle lines and sites for tablets at Antietam," required for the use of the War Department for the service of the fiscal year ending June 30, 1899.

Very respectfully,

R. A. ALGER, *Secretary of War.*

The SECRETARY OF THE TREASURY.

WAR DEPARTMENT,
QUARTERMASTER-GENERAL'S OFFICE,
Washington, March 30, 1898.

SIR: In compliance with your indorsement of the 23d instant upon report of the Antietam Battlefield Board, I have the honor to submit herewith estimate of appropriation required for repair of roads constructed upon land owned by the United States within the limits of the Antietam battlefield, near Sharpsburg, Md., and for repainting and preservation of the ironwork of observation tower, cannon monument, gun carriages, and cast-iron tablets, all made and constructed by the United States upon public land under the acts of August 30, 1890; August 5, 1892; March 3, 1893; March 2, 1895; June 8, 1896; June 11, 1896, and July 19, 1897, by which the total sum of $78,031 was appropriated under the title "Battle lines and sites for tablets at Antietam."

The four public highways radiating from Sharpsburg supply, in part, the means of communication over the battlefield, but those have been supplemented by highways made by the United States upon land purchased for that purpose in area slightly more than 22¼ acres, the total length of rights of way being slightly more than 5 miles, and as the roads follow straight lines generally their grades, owing to the unevenness of the general surface of the Antietam field, are in many places quite abrupt. The erosion from rain water is therefore considerable, and annual repairs will be necessary to keep the roads in proper condition.

Jones's locked wire fence was adopted and has been placed along each side of all roads. Those fences can be kept in good condition only through the exercise of constant care and slight repairs when needed.

The cast-iron tablets bearing legends descriptive of the movements and other actions of the troops, set at points convenient to the localities or movements described, are painted, and they, as well as the ironwork of observation tower, the cannon monument, and cast-iron gun carriages, will at times require repainting.

Nearly all the roads referred to having been constructed in 1894–95, and having had very little attention since that time, now require somewhat extensive repairs.

The president of the Antietam Battlefield Board has expressed the opinion that the sum of $3,000 called for by the accompanying estimate will suffice for road and other repairs for the coming fiscal year, and that a less sum will be required annually thereafter.

A copy of the report of the president of the board and of the indorsement thereon by the Secretary of War is submitted herewith.

Respectfully,

M. I. LUDINGTON,
Quartermaster-General United States Army.

The SECRETARY OF WAR.

WAR DEPARTMENT,
Washington, March 18, 1898.

SIR: The work of surveying, locating, and preserving the lines of battle of the Army of the Potomac and the Army of Northern Virginia, at Antietam, Md., and of marking the same, etc., under the direction of the Secretary, was authorized by the act of August 30, 1890. The legislation will be found in the sundry civil act under the heading of National Cemeteries. By subsequent legislation, found in the annual appropriation acts for sundry civil expenditures and under same heading the continuation of the work was authorized, and some

tional authority was granted by Congress respecting the character extent of the work to be done, such as the acquirement of land by hase or gift and the marking of positions, etc., on the closely ed fields of Harpers Ferry, South Mountain, Cramptons Gap, Shepherdstown.

e total appropriations made by Congress for this field are $78,031, the whole amount has been expended in carrying the work to con- on, save a small balance that will be required in completing maps e field.

e work was commenced under the supervision of the Quartermaster- ral, by a board consisting of Col. John C. Stearns, formerly United es Volunteers, and Gen. Henry Heth, formerly of the Confederate . On the 8th of October, 1894, the board was reorganized, and as constituted consisted of Maj. George B. Davis, United States y, president; Gen. Henry Heth, late Confederate States army; . Ezra A. Carman, late United States Volunteers, and their opera- s were thereafter under the direction of the Secretary of War. In I relieved Maj. George B. Davis from duty on the board.

esides the surveys and preparation of maps illustrating the physical military features of the field, work was done as follows:

. *Cast-iron tablets* (erected on iron stands), bearing legends descrip- of the movements and other action of the troops.

torical tablets:	
Antietam	213
Harpers Ferry	5
South Mountain	6
Cramptons Gap	9
Shepherdstown	5
lity tablets:	
Antietam	20
s tablets (about)	150

al: Historical, 238; locality, 20; and guideboards, 150.

ese are set at points convenient to the localities or movements ribed, and bear legends or descriptions cast in raised letters on the of the iron plates, which are painted black, while the surface of d lettering is painted white. With occasional repainting at small nse they will endure for centuries. All stand upon land owned by United States or upon the public highways.

Monuments to mark the place of death or mortal wounding of gen- officers in the two armies. These consist of a masonry foundation se of rubble in cement mortar. Set in these bases, inverted, are ze 12-pounder guns, the chase of each gun for about 18 inches of its h being built into the masonry. Bolted upon each gun near the h is a bronze plate bearing an inscription giving the name of the ral officer whose death is thus recorded. These monuments should l for centuries without repairs.

Means of communication.—The four public highways radiating Sharpsburg supply this in part. These have been supplemented ighways made by the United States upon land purchased for that ose. The area of land acquired is slightly more than 22¼ acres, the total length of rights of way 9,150 yards, or slightly more than es. The plan of road construction adopted provided for a width of stone macadam of 12 feet and thickness of 7 inches, and a part have d side gutters. The water passes were usually vitrified earthen- pipes. At a few points where the road intersected considerable r courses stone culverts were provided.

e general surface of the Antietam field is so uneven that, as the s follow straight lines generally, their grades are in many places

quite abrupt. The erosion from rain water is therefore considerable, which will require annual repairs to these highways. Their usage by the public is considerable, which increases the wear and tear.

4. *Fences.*—Along each side of all roads is a fence. Jones's locked-wire fence was adopted. The posts are of sawed locust and chestnut, all painted with asphaltum paint and surmounted with ball ornaments of cast iron. Suitable gates have been provided for industrial use of the abutting landowners. These fences will, of course, require annual repairs.

5. *Observation tower.*—At a commanding point on the field there has been erected a tower of limestone masonry, 15 feet square and about 60 feet high. It is ascended by means of an iron stair of easy rise. The observatory is surrounded by a parapet wall covered with a heavy stone coping, and this covered by a bronze plate upon which are inscribed, in raised letters, guide arrows and directions to notable localities on the field and in the neighborhood. The tower will never require any repairs save painting of ironwork.

6. *Cannon monument.*—In front of the railroad station at Antietam Station, and within the right of way of the road, is a monument composed of eight field guns, set breech down on a block of granite nearly three feet cube. These guns lean against each other at the muzzle, and are held by a cast-iron plate upon which is a pyramid of cannon balls. The base of this monument was donated and set by the Norfolk and Western Railroad. The guns were of a lot furnished by the Ordnance Department for marking the field. This structure will never need any repairs, save painting of ironwork.

7. *Monuments to organizations.*—Fourteen or fifteen battle monuments have been erected by associations or States for marking positions, etc. Two regimental monuments were erected several years ago within the national cemetery; others stand on ground acquired by purchase, and three of these plats have been conveyed to the United States and titles have been accepted by the Secretary of War. It is probable that the deeds of the other monument sites will also be transferred. The area of land donated to the Government is a little more than 10.25 acres. The total area owned is therefore about 32.50 acres.

8. *Field guns.*—Besides the pieces used as monuments to mark the place of death of general officers, there are eight other field pieces, mounted upon carriages of cast-iron of same pattern as those used in 1862. These are placed on commanding artillery positions. The carriages will require painting from time to time, but no other repairs.

When the proposed maps of the field are completed, the functions of the Antietam board will have ceased, but the need of official supervision and care-taking will continue. Road repairs will be continually necessary if these highways are to be maintained in a serviceable condition. While they are a great advantage to the community as supplying shorter and more convenient farm roads, the assumption of a charge for repairs would probably be declined by the local authorities, since they feel that a road on public land and constructed by the United States would also be kept in repair at the charge of the public.

As the Antietam board will soon have no legal existence, and as no means have been provided for maintaining these roads under any of the Government Departments, it would seem to be necessary that steps be now taken to provide for the care of the public property on the battlefield.

As has already been stated, the original appropriation was made under the heading of "National cemeteries," and this appropriation is disbursed under the supervision of the Quartermaster-General. It is

respectfully suggested that this officer be instructed to exercise a supervision over the public property on the Antietam field, and to make provisons for necessary repairs. Near the center of this historic spot is now located a national cemetery, where are buried some 4,700 Union soldiers. This is connected with the nearest railroad station by a fine wagon road, 9,300 feet long, that was made in pursuance of law by the Quartermaster-General, at a cost of $30,000. A cemetery superintendent resides at this place, who is presumed to be able and competent to take charge of the 5 miles of additional highways, the tablets, tower, and monuments.

Nearly all the roads were constructed in 1894–95, and they have had very little attention since. They now require somewhat extensive repairs. I have taken pains to make some inquiries respecting the extent and cost of the work needed, and would state that for the coming year an expenditure of about $3,000 in road repairs and general care will be needed. Thereafter an expenditure of $1,000 per annum will suffice.

Herewith please find a sketch upon which the important roads are shown, also monuments, etc., owned by the United States and by regimental or other associations.

The cost of the principal items of work done by the Antietam board is as follows:

For land	$3,400
Roads, culverts, fencing, etc	24,600
Observation tower	3,800
Tablets, etc	6,400
Gun monuments and field guns	1,500

It is said to be the intention of some of the societies, etc., that have erected monuments on the field to donate to the United States the land and monuments secured through private means.

Respectfully,

GEO. W. DAVIS,
Major, United States Army,
President Antietam Battlefield Board.

The SECRETARY OF WAR,
Washington, D. C.

[First indorsement.]

WAR DEPARTMENT,
OFFICE OF THE SECRETARY,
March 23, 1898.

The recommendations of Major Davis are approved, and the Quartermaster-General will submit estimates for funds necessary for repair and preservation of the roads, fences, tablets, monuments, etc., belonging to the United States situated on the battlefield of Antietam.

By order of the Secretary of War:

A. N. THOMPSON,
Acting Chief Clerk.

Estimates of appropriations required for the service of the fiscal year ending June 30, 1899, by the Quartermaster's Department, United States Army.

Care and preservation of monuments, tablets, roads, etc., Antietam battlefield:

For repair and preservation of monuments, tablets, observation tower, roads, and fences, etc., made and constructed by the United States upon public land within the limits of the Antietam battlefield, near Sharpsburg, Md. (submitted) $3,000

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55TH CONGRESS, 2d Session. | SENATE. | DOCUMENT No. 221.

DISPOSAL OF CERTAIN USELESS PAPERS OF THE WAR DEPARTMENT.

LETTER

FROM

THE SECRETARY OF WAR,

REPORTING

THAT, IN ACCORDANCE WITH REPORT OF THE JOINT SELECT COMMITTEE OF THE SENATE AND HOUSE OF REPRESENTATIVES (SENATE REPORT 1083, FIFTY-FIRST CONGRESS, FIRST SESSION), CERTAIN USELESS PAPERS OF THE WAR DEPARTMENT HAVE BEEN DISPOSED OF AS WASTE PAPER.

APRIL 4, 1898.—Referred to the Committee on Military Affairs and ordered to be printed.

WAR DEPARTMENT,
Washington, March 31, 1898.

SIR: In compliance with a requirement of the act of Congress entitled "AN act to authorize and provide for the disposition of useless papers in the Executive Departments," approved February 16, 1889, I have the honor to report that in accordance with the report of the joint committee of the Senate and House of Representatives (Senate Report 1083, Fifty-first Congress, first session), certain useless papers of this Department, referred to in said report as of no value or historical interest, have been disposed of as waste paper, and the proceeds thereof, amounting in the aggregate to $1,531.42, deposited in the Treasury of the United States.

Very respectfully,

R. A. ALGER,
Secretary of War.

Hon. GARRET A. HOBART,
Vice-President of the United States and President of the Senate.

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55TH CONGRESS, 2d Session. | SENATE. | DOCUMENT No. 222.

PAY OF STAR-ROUTE CONTRACTORS.

LETTER

FROM

THE POSTMASTER GENERAL,

IN RESPONSE TO

RESOLUTION OF THE SENATE OF MARCH 24, 1898, RELATIVE TO PAY OF CONTRACTORS AND SUBCONTRACTORS FOR CARRYING THE MAILS ON WHAT ARE KNOWN AS STAR ROUTES

APRIL 4, 1898.—Referred to the Committee on Post-Offices and Post-Roads and ordered to be printed.

POST-OFFICE DEPARTMENT,
OFFICE OF THE POSTMASTER-GENERAL,
Washington, D. C., March 31, 1898.

SIR: In response to the resolution of the Senate of March 28, 1898, in relation to the response made by the Postmaster-General to the Senate resolution of February 25, 1898, relative to the pay of contractors and subcontractors for carrying the mails on what are known as star routes (as per Senate Document No. 184) and calling for the amount annually paid to certain specified contractors and the subcontract rate of pay on the routes sublet by said contractors, I have the honor to submit the following:

There are contracts now in force in the name of J. M. Boreing for carrying the mail on 613 star routes throughout the United States, on which his annual pay is $97,163.93. On 592 of these routes subcontracts have been filed in the Department, for which the contractor's annual pay is $88,619.31 and the subcontractors' pay is $79,611.75.

There are contracts now in force in the name of A. A. Call for carrying the mail on 764 star routes throughout the United States, on which his annual pay is $208,174.01. On 693 of these routes subcontracts have been filed in the Department, for which the contractor's annual pay is $178,562.67 and the subcontractors' pay is $158,156.94.

There are contracts now in force in the name of W. H. Steele for carrying the mail on 614 star routes throughout the United States, on which his annual pay is $229,173.28. On 578 of these routes subcontracts have been filed in the Department for which the contractor's annual pay is $208,846.32 and the subcontractors' pay is $189,724.80.

There are contracts now in force in the name of L. H. Hansberger for carrying the mail on 814 star routes throughout the United States,

on which his annual pay is $207,784.02. On 795 of these routes subcontracts have been filed in the Department, for which the contractor's annual pay is $202,552.49 and the subcontractors' pay is $177,258.23.

There are contracts now in force in the name of Evan Jones for carrying the mail on 282 star routes throughout the United States, on which his annual pay is $43,369.28. On 271 of these routes subcontracts have been filed in the Department, for which the contractor's annual pay is $41,633.68 and the subcontractors' pay is $37,912.83.

There are contracts now in force in the name of J. B. Anglin for carrying the mail on 411 star routes throughout the United States, on which his annual pay is $41,105.89. On 366 of these routes subcontracts have been filed in the Department, for which the contractor's annual pay is $35,360.69 and the subcontractors' pay is $30,419.18.

There are contracts now in force in the name of J. D. Franklin for carrying the mail on 319 star routes throughout the United States, on which his annual pay is $59,096.42. On 286 of these routes subcontracts have been filed in the Department, for which the contractor's annual pay is $51,031.37 and the subcontractors' pay is $45,618.28.

There are contracts now in force in the name of Gardner Cowles for carrying the mail on 874 star routes throughout the United States, on which his annual pay is $197,540.65. On 845 of these routes, subcontracts have been filed in the Department, for which the contractor's annual pay is $187,322.13 and the subcontractor's pay is $162,262.84.

There are contracts now in force in the name of J. M. Slavens for carrying the mail on 167 star routes throughout the United States, on which his annual pay is $59,189.08. On 155 of these routes, subcontracts have been filed in the Department, for which the contractor's annual pay is $54,997.58 and the subcontractor's pay is $51,307.91.

There are contracts now in force in the name of F. S. Smith for carrying the mail on 364 star routes throughout the United States, on which his annual pay is $75,457.94. On 347 of these routes, subcontracts have been filed in the Department, for which the contractor's annual pay is $70,653.97 and the subcontractor's pay is $61,993.23.

There are contracts now in force in the name of F. E. Means for carrying the mail on 737 star routes throughout the United States, on which his annual pay is $153,264.41. On 723 of these routes subcontracts have been filed in the Department, for which the contractor's annual pay is $151,118 and the subcontractor's pay is $136,552.69.

There are contracts now in force in the name of W. L. White for carrying the mail on 130 star routes throughout the United States, on which his annual pay is $20,564.11. On 124 of these routes subcontracts have been filed in the Department, for which the contractor's annual pay is $19,058.31 and the subcontractor's pay is $16,791.62.

To recapitulate, the total number of contracts for service in the names of these twelve contractors is 6,089, on which the aggregate annual pay is $1,391,874.02. Of these, subcontracts have been filed in the Department for 5,775 routes, on which the annual contract pay is $1,289,756.52, and the subcontract pay is $1,147,610.60, the excess of the contract pay over the subcontract pay for those routes on which subcontracts have been filed in the Department being $142,145.92 per annum.

Very respectfully,

JAS. A. GARY,
Postmaster-General.

The VICE-PRESIDENT,
United States Senate.

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5TH CONGRESS, 2d Session. | SENATE. | DOCUMENT No. 223.

VENEZUELA CLAIMS.

MESSAGE

FROM THE

'RESIDENT OF THE UNITED STATES,

TRANSMITTING,

RESPONSE TO RESOLUTION OF THE SENATE OF JANUARY 17, 1898, A REPORT FROM THE SECRETARY OF STATE, ACCOMPANIED BY COPIES OF CORRESPONDENCE EXCHANGED BETWEEN HENRY WOODRUFF, TRUSTEE, AND OF COUNSEL FOR THE HOLDERS OF A MAJORITY OF THE FIRST-MORTGAGE BONDS OF "THE RAILWAY OF THE EAST," OF VENEZUELA, ET AL., AND THE DEPARTMENT OF STATE, AND LIST OF CLAIMS OF CITIZENS OF THE UNITED STATES.

PRIL 4, 1898.—Read, referred to the Committee on Foreign Relations, and ordered to be printed.

To *the Senate of the United States:*

In response to the resolution of the Senate of January 17, 1898, I transmit a report from the Secretary of State, accompanied by copies of correspondence exchanged between Henry Woodruff, trustee, and of counsel for the holders of a majority of the first-mortgage bonds of "The Railway of the East," of Venezuela, et al., and the Department of State, and by a list of claims of citizens of the United States, presented after August 1, 1868, and, so far as appears, not settled by Venezuela nor disposed of by the commission of 1889–90.

WILLIAM MCKINLEY.

EXECUTIVE MANSION,
Washington, April 4, 1898.

The PRESIDENT:

The undersigned, Secretary of State, to whom was referred the resolution of the Senate of the United States, dated January 17, 1898, and reading as follows:

Resolved, That the Secretary of State be, and hereby is, requested (if not incompatible with the public interests) to furnish the Senate copies of all correspondence since 1870 between Henry Woodruff, trustee and counsel for the holders of a majority of the first-mortgage bonds of "The Railway of the East" of Venezuela et al. and the Department of State.

And also to furnish a statement of the general nature, subject-matters, and

amounts of all claims of individuals or corporations, citizens of the United States, upon the Government of Venezuela which may have been presented to their Government or to its legation at Caracas since the 1st day of August, 1868, the date specified in Article II of the convention of December 5, 1885, for a reopening of the claims of citizens of the United States against Venezuela, under treaty of April 25, 1866, and which have not been settled by the Government of Venezuela—

has the honor to submit, for transmission to the Senate, if deemed not incompatible with the public interest, copies of correspondence on file in this Department between Henry Woodruff, trustee, and of counsel for the holders of a majority of the first-mortgage bonds of "The Railway of the East" of Venezuela et al. and the Departmentof State; also a list of claims of citizens of the United States presented after August 1, 1868, and, so far as appears, not settled by Venezuela nor disposed of by the commission of 1889–90.

Respectfully submitted.

JOHN SHERMAN.

DEPARTMENT OF STATE,
Washington, April 1, 1898.

List of papers.

Mr. Woodruff to Mr. Fish, May 13, 1871.
Mr. Hunter to Mr. Woodruff, May 18, 1871.
Mr. Woodruff to Mr. Fish, May 22, 1871.
Mr. Woodruff to Mr. Fish, May 23, 1871.
Mr. Fish to Mr. Woodruff, May 25, 1871.
Mr. Woodruff to the President, June 15, 1871.
Mr. Woodruff to Mr. Evarts, January 27, 1881.
Mr. Woodruff to Mr. Blaine, April 4, 1881.
Mr. Payson to Mr. Woodruff, April 11, 1881.
Mr. Woodruff to Mr. Blaine, April 12, 1881.
Mr. Woodruff to Mr. Frelinghuysen, March 22, 1884.
Mr. Frelinghuysen to Mr. Woodruff, March 25, 1884.
Mr. Woodruff to Mr. Frelinghuysen, March 2, 1885.
Mr. Woodruff to Mr. Bayard, November 10, 1885.
Mr. Bayard to Mr. Woodruff, November 14, 1885.
Mr. Woodruff to Mr. Bayard, November 14, 1885.
Mr. Woodruff to Mr. Bayard, November 20, 1885.
Mr. Woodruff to Mr. Bayard, March 31, 1887.
Mr. Bayard to Mr. Woodruff, April 8, 1887.
Mr. Woodruff to Mr. Lamont, April 29, 1887.
Mr. Woodruff to the President, April 29, 1887.
Mr. Rives to Mr. Woodruff, January 24, 1888.
Mr. Woodruff to Mr. Bayard, May 22, 1888.
Mr. Woodruff to Mr. Bayard, July 9, 1888.
Mr. Rives to Mr. Woodruff, July 11, 1888.
Mr. Woodruff to Mr. Bayard, August 28, 1888.
Mr. Bayard to Mr. Woodruff, September 6, 1888.
Mr. Woodruff to Mr. Bayard, September 17, 1888.
Mr. Adee to Mr. Woodruff, September 19, 1888.
Mr. Woodruff to Mr. Rives, November 14, 1888.
Mr. Rives to Mr. Woodruff, November 15, 1888.
Mr. Woodruff to Mr. Blaine, April 23, 1889.
Mr. Wharton to Mr. Woodruff, May 6, 1889.
Mr. Woodruff to Mr. Blaine, June 26, 1889.
Mr. Woodruff to Mr. Wharton, July 24, 1889.
Mr. Woodruff to Mr. Blaine, October 8, 1889.
Mr. Adee to Mr. Woodruff, October 18, 1889.
Mr. Woodruff to Mr. Blaine, September 1, 1890.
Mr. Woodruff to Mr. Blaine, November 19, 1890.
Mr. Blaine to Mr. Woodruff, December 9, 1890.
Mr. Woodruff to Mr. Gresham, May 16, 1894.
Mr. Uhl to Mr. Woodruff, May 25, 1894.
List of claims of American citizens presented after August 1, 1868, and, so far as appears, not settled by Venezuela, nor disposed of by the commission of 1889–90.

Mr. Woodruff to Mr. Fish.

WASHINGTON, *May 13, 1871.*

SIR: The information I received to-day of the serious consideration by the Executive Department of the question of distributing to the holders of certain certificates, payable to bearer, the moneys on deposit made by the Venezuelan Government, was a surprise to me in a matter in which clients of mine, citizens of the United States, resident in New York, Vermont, and New Jersey, have a deep interest.

Such distribution may be construed as a sanction by our Government of the awards of the Mixed Commission that sat under the convention with Venezuela, and thus constitute a bar against their just claims, amounting to over $250,000, and which, though duly presented to the commission, was left undecided; which it would tend to confirm proceedings and awards, which, after quite full investigation, I feel prepared to show were thoroughly corrupt, and ought to be set aside as utterly void.

The agreement suggested to my clients by the agent in the matter of one of the commissioners, by which they should make an assignment to him of a one-half interest in their claims (as has been done, as he stated, by many other claimants), was declined by them, and they very justly feel aggrieved that the judgment of a commission organized ostensibly to adjudicate their claims, among others, could only be obtained by a corrupt alliance with it, and that about the only parties to be benefited under the convention, if the awards of the commission are upheld, will be those who were parties to its corruption.

At the time my clients first became aware, through official sources, of the illegal proceedings of the commission and the consummation by the awards, of the corrupt agreements made in the interest of some if not all of the commissioners, I was informed at the State Department that the matter had, by reason of questions raised by the Venezuelan Government, been referred to Congress. I supposed that further action would, of course, await the expression of the desire of Congress thereon by bill or resolution.

The grounds on which the proposed distribution of the moneys referred to are now based differ widely from what I had deemed unquestioned facts, and still regard as facts, though questioned. Permit me most respectfully to submit that notwithstanding the statements you may have received from one or more sources as to the views of the majority of the Committee on Foreign Affairs of the Senate upon the resolution of the House in this matter, I do not believe that such majority were in favor of that resolution, but that they were decidedly against it, as the House committee and the House would doubtless have been had they been as fully informed of the facts when the matter was under their consideration. There are, as you are well aware, two recognized ways of killing a resolution. One is to hurl a report against it; the other (considered the more kindly if it has sensitive friends who might be hurt by the report) to let it die for want of support.

Before the presumed assent of the majority of the late Committee on Foreign Affairs of the Senate to that resolution be made any part of the basis of proceedings in this matter, I take the liberty of suggesting that the concurrence of a majority of that committee in that view be brought personally to your knowledge.

In behalf of my clients, I respectfully ask that they may have ten days from this date within which to present to your consideration more

fully their objections to any distribution of these moneys and a statement of the facts bearing upon the merits of their case.

I have the honor, etc.,

HENRY WOODRUFF.

Mr. Hunter to Mr. Woodruff.

DEPARTMENT OF STATE,
Washington, May 18, 1871.

SIR: In reply to your letter of the 13th instant, relative to Venezuelan claims, I have to state that the subject will receive the attention of this Department.

I am, sir, your obedient servant,

W. HUNTER,
Second Assistant Secretary.

HENRY WOODRUFF, Esq.,
No. 90 Broadway, New York.

Mr. Woodruff to Mr. Fish.

NEW YORK, *May 22, 1871.*

SIR: It would not be possible for me within the time limited by the apparently urgent circumstances of the new phase of the case to present to you more fully than is presented in their memorial forwarded to the Senate the facts upon which my clients, the memorialists, rest their objections to the proposed distribution of certain moneys to the holders of the certificates to bearer, issued by the late mixed commission, organized under the convention between our Government and Venezuela.

Permit me, therefore, to ask that the copy of the memorial which is herewith inclosed be considered as here embodied in and made a part of this communication.

In the interest of my clients, which coincides with the interest that every one should feel in rebuking fraud and the prostitution of official trusts to private purposes, I respectfully ask that the distribution of those moneys may be postponed till the action of the Senate (which has heretofore in this matter been requested by the President, and is now invoked by the said memorialists) shall indicate more decidedly, if possible, than it has already done, by refusing to sanction the joint resolution of the House of Representatives directing such distribution, its views on the several questions involved.

I have the honor, etc.,

HENRY WOODRUFF.

Mr. Woodruff to Mr. Fish.

NEW YORK, *May 23, 1871.*

SIR: Since inclosing to you yesterday, as a part of my note of that date, a copy of the memorial of Flanagan, Bradley, Clark & Co. and others, I have discovered that the printer in copying the signature of Mr. Donaldson omitted one of his initials. The proper signature is "Jno. J. Donaldson," etc., as in the copy inclosed herewith, which you

ill please substitute for the one sent yesterday. The signature to the emorial is that of Mr. Donaldson, president of the Bank of North merica.

Respectfully, yours, HENRY WOODRUFF.

Mr. Fish to Mr. Woodruff.

DEPARTMENT OF STATE,
Washington, May 25, 1871.

SIR: I have received your letter of the 22d instant, inclosing a printed py of a memorial to the Senate of the United States in relation to the oceedings of the late mixed commission of the United States and Vene- ela, and asking the postponement of the distribution of certain money the holders of the certificates to bearer, issued by said commission, ntil a decision shall have been reached by Congress. In reply, I have inform you that the subject will be carefully considered.

I am, sir, your obedient servant,

HAMILTON FISH.

[Telegram.]

Mr. Woodruff to the President.

NEW YORK, *June 15, 1871.* (Received 6.40 p. m., June 15.)

Will you, after having referred the matter to Congress, now, as Exec- ive, sanction the notorious corruption of that Venezuelan Commission y directing the distribution of the moneys advanced by the Venezuelan overnment upon a specific understanding, and thereby prejudice the ghts of citizens of the United States who refused to join in the cor- ption, and whose memorial was referred by the Senate to its Committee Foreign Relations, and is still there under consideration? Permit e to call your attention to your message of March 1, 1870, the dispatch Mr. Fish to Mr. Partridge, November 20, 1869, and to the memorial, py of which I send you by this evening's mail. Can not the Depart- ent of State and the Senator who is urging the distribution await the finite action of Congress? It is well known by that Senator that the ajority of the Senate committee were opposed to the action of the House; ey, having an investigation, became convinced of the thorough cor- ption of that commission. Why not let this matter rest till Congress ts definitely? Senator Morton's honest friends can certainly afford wait six months. We see no necessity for your taking the responsi- lity of distributing the rewards of corruption with considerations.

HENRY WOODRUFF,
For Himself, and of Counsel for the Memorialists.

Mr. Woodruff to Mr. Evarts.

NEW YORK, *January 27, 1881.*

SIR: Herewith I inclose, that it may be filed in the Department of ate, a power of attorney, given by William F. Miller, in reference to rtain certificates issued to him by the late mixed commission under nvention with the Government of Venezuela.

Very respectfully, yours

HENRY WOODRUFF.

Mr. Woodruff to Mr. Blaine.

TRINITY BUILDING,
New York, April 4, 1881.

SIR: By the late Venezuela Mixed Commission there was issued to William S. Miller four certificates (Nos. 350, 351, 352, 353, each for $2,875) amounting to $11,500.

Under the rulings of the Department heretofore made, certain percentages of the moneys paid by Venezuela to the Secretary of State have been paid to the holders of certificates.

Mr. Miller, having as yet received nothing, would now be pleased to receive the amount thus payable on his certificates, which, under the power of attorney made by him and filed in your office on the 27th day of January last, you will please remit to my order.

Very respectfully, yours,

HENRY WOODRUFF.

Mr. Payson to Mr. Woodruff.

DEPARTMENT OF STATE,
Washington, April 11, 1881.

SIR: I have to acknowledge the receipt of your letter of the 4th instant, and in reply to state that this Department has not directed the payment of an installment on the Venezuelan certificates since that provided for under the notice of April 28, 1876. I have also to state that such payments are made on the presentation of the certificates, and are noted thereon.

I am, sir, your obedient servant,

CHAS. PAYSON,
Third Assistant Secretary.

Mr. Woodruff to Mr. Blaine.

TRINITY BUILDING, *New York, April 12, 1881.*

SIR: I have to-day letter from your Department bearing date the 11th instant, in acknowledgment of receipt of mine of the 4th instant.

As Mr. William F. Miller, to whom the Venezuelan Mixed Commission awarded $11,500, and directed the issue of your certificates (Nos. 350, 351, 352, and 353, for $2,875 each), representing the same, has never received from the commissioners the certificates, nor from the Department, either directly or indirectly, *any installment whatever* on the same, he would be pleased to be informed as to what amount is now payable on his certificates upon presentation of the same. If any installments have been paid on those certificates, he desires to know *to what amount and to whom?*

Very respectfully, yours, HENRY WOODRUFF.

Mr. Woodruff to Mr. Frelinghuysen.

EBBITT HOUSE, *Washington, March 22, 1884.*

SIR: When, on the 19th of last June, I had the honor of a conversation with you at the Department of State in respect to the possibility of an early appointment of a new commission, pursuant to the recom-

nendation contained in the "joint resolution providing for a new mixed ommission in accordance with the treaty of April 25, 1866, with the Jnited States of Venezuela," which, having passed the Congress by a ubstantially unanimous vote, was approved by the President on the d day of March, 1883, I entertained no doubt but that at an early day here would be constituted a tribunal, under that treaty, before which laimants who were not disposed to become conspirators might at last e heard. And in the interviews in November last I supposed the onclusion was reached that it was not necessary, in the opening of diplomatic correspondence with the Government of Venezuela with a iew to the renewal of the general stipulations of the treaty of April 5, 1866, and the appointment thereunder of a new commission," to ssume a release of Venezuela from whatever of binding force and ffect, if any, the old determination or awards might have; that they ight be considered as standing as judgments frequently are when a ew trial is ordered, and the release of Venezuela therefrom only conded when Venezuela gave the evidence of her good faith by joining i the creation of the new commission.

To the appointment of such a commission Venezuela, according to the ublished diplomatic correspondence of 1876, has long stood pledged. would respectfully recall your attention to the letter of the representtive of the Venezuelan Government (Senor J. B. Dalla Costa) to the Department of State, bearing date December 14, 1876, in which he ays that—

> It is only desired that a new and competent commission shall be appointed under at treaty, and the Government of Venezuela will for that purpose, if necessary, ormally agree to the extension of all its provisions. * * * The Government f Venezuela will also agree that the new commission may sit either in Caracas or Vashington, as the Government of the United States may prefer.

As by this statement of the representative of the Venezuelan Government and by the passage by our Government of the joint resolution pproved by the President March 3, 1883, the two Governments would eem to be, in view of the alleged and acknowledged corruption of the old ommission, in perfect accord as to the propriety of appointing a new ommission, and as all honest claimants must be anxious for its early rganization, and as more than a year has now elapsed since the Presient approved the joint resolution, I trust that I am not untimely in espectfully calling the attention of the Department to the matter and eeking to know what are the probabilities of an early organization f the tribunal.

Very respectfully, yours,

HENRY WOODRUFF,
Of Counsel for the "Aspinwall" and "Railway of the East" Claimants.

Mr. Frelinghuysen to Mr. Woodruff.

DEPARTMENT OF STATE,
Washington, March 25, 1884.

SIR: In response to your letter of the 22d instant touching the ppointment of a new mixed commission between the United States nd Venezuela, pursuant to the joint resolution of Congress approved Iarch 3, 1883, I have to observe that Mr. Soteldo, the new Venezuelan inister here, has already proposed resuming the negotiations upon the

subject which were interrupted by his predecessor's (Mr. Camanche's) death, and that such proposal is at present under consideration.

I am, sir, your obedient servant,

FREDK. T. FRELINGHUYSEN.

Mr. Woodruff to Mr. Frelinghuysen.

WASHINGTON, D. C., *March 2, 1885.*

SIR: Recent movements on the part of those claiming to hold certificates representing certain awards made by the now acknowledged corrupt mixed commission that sat under the treaty of April 25, 1866, between the United States and Venezuela, and the correspondence of the Department of State, called forth by the action of Congress and published, have caused some fear that just at this juncture an effort is being made to have the moneys paid by Venezuela, and now in the control of the Department of State, amounting to about $284,412.25, distributed to the chief conspirators or their immediate representatives, notwithstanding the law (joint resolution) of March 3, 1883, which specifically directs that "the moneys now in the Department of State, received from the Government of Venezuela on account of said awards, and all moneys that may hereafter be paid under said treaty, shall be distributed pro rata in payment of such awards as may be made by the commission to be appointed in accordance with this resolution."

You will pardon me for suggesting that perhaps your attention has not been specially called by your subordinates in the Department to the fact that of the so-called "undisputed cases," besides the general *half-part interest* in them held by the conspirators under their powers of attorney and agreements, *all* the certificates representing the *commissioners'* awards to Seth Driggs, on Claims Nos. 11, 19, 32, and 21, amounting to $150,000, were retained by Commissioner Talmage as *his share;* and *all* the certificates representing the commissioners' award to Ralph Rawdon (Claim No. 27) for $100,000, went into the hands of Whiton, who has heretofore drawn the installments paid on the same, as shown by Statement C, accompanying your communication to the President, under date of June 30, 1884. Mr. Whiton, it appears, is not (or was not) unknown to the Department, for he testified that, before the commission sat, he was "told at the State Department that if there was an honest claim against the Government of Venezuela it was the Idler claim." And that he had "a partial recollection that Mr. Hunter made that remark." Idler got an umpire award, but Whiton got *all* the Rawdon certificates.

The conspirators appear to have been presciently fortunate in their selection, from among the certificates payable "to bearer," of those representing the awards in which the two commissioners joined. And now they mask under the "undisputed cases" so frequently referred to in the correspondence of the Department.

The records of the commission and of your Department show very clearly the position of the claimants I represent, and the interest they have in the faithful observance of the law as it stands. In their behalf I respectfully protest against the payment of any of said moneys to any person or persons other than your successor in office. Regarding it as a fund now held in trust for such awards as may be made by a new commission acting upon our claims, we feel, in view of the many sudden surprises that have marked the history of the matter, justified

n notifying you that should our interests suffer by reason of any unauhorized action taken or permitted, the responsibility attached thereto rill be enforced.

Very respectfully,

HENRY WOODRUFF,
Of Counsel for the "Aspinwall" and "Railway of the East" Claimants.

Mr. Woodruff to Mr. Bayard.

NEW YORK, *November 10, 1885.*

SIR: When Congress, by a substantially unanimous vote of the House nly one Member dissenting), and the unanimous vote of the Senate, assed, and the President approved, March 3, 1883, the "Joint resolu-on providing for a mixed commission in accordance with the treaty of pril 25, 1866, with the United States of Venezuela," it was supposed at the prolonged controversy which the original conspiracy, organized s a "commission" in 1867–68, together with its subsequent accessions, ad kept on foot for some fifteen years, was at last at an end.

From the time when the House Committee on Foreign Affairs first xercised its power to send for persons and papers in the matter, in the Forty-fourth Congress, down to the passage of the joint resolution at he close of the Forty-seventh Congress, the reports of committees and the action of Congress constitute an ever-increasing denunciation of the conspiracy that masqueraded as a commission under that treaty.

Official opinions expressed by former Secretaries of State, on a policy pursued *before such thorough investigation disclosed the all-pervading corruption of the tribunal*, can be of no authority in the case as it now stands disclosed, and, upon such full disclosure, *definitely acted upon by Congress, at the request of the Executive.*

In the direct and speedy execution of the purpose of that law, the long-suffering "Aspinwall" and "Railway of the East" claimants have a deep interest. By having declined to take any part in that mercenary conspiracy, they not only failed to obtain a hearing before that corrupt tribunal, but have apparently, also, placed their interests beyond the pale of thoughtful consideration, hitherto, by the Department of State.

And yet, as early as May 12, 1871, Mr. William H. Aspinwall wrote to the Secretary of State: "I believe that I and others are fully entitled to an annulment of the proceedings of the commission." The "Aspinwall claims," based upon evidence of indebtedness given by the Government of Venezuela, amount to $183,000, exclusive of interest.

The same month (May, 1871) the bondholders of Railway of the East presented their memorial to Congress, and furnished the Department of State with a copy of the same, setting forth their claims, amounting (exclusive of interest) to $221,800. (Vide House Report No. 787, Forty-fourth Congress, first session, pp. 103–106; Ibid., pp. 145–147.)

That verified memorial, setting forth the proceedings of the commission that could have no rational explanations according to any other theory than that of corrupt intent, closed with a request that this matter be referred to a committee empowered to administer oaths and send for persons and papers, "that corruption may be deprived of its reward and justice done."

That request, owing to the violent opposition of the conspirators and their allies, was not granted by Congress till 1876, when the Forty-fourth Congress prosecuted an investigation of the conspiracy and disclosed the extent of its rapacity.

The report that followed that investigation refers to the "Aspi and "Railway of the East" claims as having "every evidence o esty and genuineness," and as being "the identical claims for the dication of which the mixed commission was created." (House I No. 787, Forty-fourth Congress, p. III.)

Surely it is time these parties were permitted to appear befor bunal competent, under the treaty of 1866, to pass upon their r nor should they be longer postponed at the instance or in the ir of successful corruptionists.

It was the evident purpose of the joint resolution of 1883 to g these and all other claimants that right.

The questions disposed of by the exhaustive report accomp that resolution can need no reargument. (Vide House Report No Forty-seventh Congress, first session.)

In view of a criticism made upon the measured terms of on graph of the preamble of that resolution, it may be well to o that the action of Congress was based upon the report of the c tee, and the thorough investigations, extending through year preceded it.

The "whereases" of the joint resolution may be commend embodying in our laws only a sufficient reference to the venalit ruption, and dishonor to show the basis of the action of Co while the resolution evidently carefully avoids putting our Depa of State at a disadvantage in negotiations with the Governm Venezuela.

The evident clear intent is to have presented to Venezue alternation of a new commission, to act under the revived "g stipulations of the treaty of April 25, 1876"—not other and different stipulations—or of remaining under the menace of th summated acts of the old conspiracy. It being about as improbab Venezuela would refuse to agree to a new commission, *on the desi basis*, as it was unlikely that our Government would ever atten further enforce the fraud, provided the Venezuelan Government agree to a new commission, pure and simple, to act within the designated by the joint resolution alone.

The terms of the resolution must be read in the light that sho its passage, if, indeed, any light be necessary to disclose the m of its clear text.

It was not passed hastily or unadvisedly. The House assigned for its consideration. The whole subject was reviewed in the li the evidence taken. What that evidence disclosed—what thos senting the resolution called upon the House to consider as the for its action, was very clearly stated, and stated in terms that quite unnecessary to embody in the law.

The chairman of the Committee on Foreign Affairs, in his pre tion of the case to the House, said:

> If it were to be supposed that this Government and its Congress would not s do what ought to be done in the interests of justice, then I have no hesit saying that this pause of fifteen years over such a mass of damning facts a contained in this report, which have been so analytically and exhaustively by the chairman of the subcommittee having the subject in charge, the ge from Massachusetts (Mr. Rice), the Government, and the Congress itself become almost particeps criminis in one of the foulest wrongs in the history country. * * * It is said that fraud vitiates everything; that the taint sets aside judgments and solemn records. Why, sir, this case is not only ta is saturated with fraud. From its inception to the end there is no clean grou where to place your foot upon. * * * We say that the only adequate rel commence the proceedings de novo. * * * A court or tribunal bribed in it

lon, corrupt in its every action, impure in all of its movements and findings, should ot be relied upon by any nation for any public action whatever. (Congressional ecord, January 18, 1883, pp. 38, 39.)

Mr. Cox, of New York, said:

I always felt, sir, as if there was some cloud over our country by reason of the erfidy, the corruption, the conspiracy, and fraud growing out of this Venezuelan nbroglio. * * * If it be said that there is no fraud in this case, I ask where, r, will you find one equal to it in the annals of this or any other country?

Mr. Springer said:

We owe it to those claimants who were too honest to become parties to a corrupt argain that they should be permitted to go before an honest tribunal and have a saring. They have been disregarded because they were too honest to enter into corrupt bargain. Will we bar honest claimants from a hearing in order that disonest ones may have dishonest awards? I think not. Therefore I appeal to the ouse to pass this bill by a unanimous vote. Let us place the seal of our condemation on that fraudulent commission and testify to the world that the American ongress will not countenance fraud, even though it has taken shelter behind the cred obligations of a treaty.

Mr. Blount said:

The Committee on Foreign Affairs and the Executive are in thorough accord, and trust, sir, that with unanimity or almost entire unanimity—my friend from West irginia dissents, but I trust there will be no other dissent on the part of the House f Representatives—this report will be adopted, and that the expression of the House ill be so decided that this whole country and all other countries may understand at the sentiment of honor, the sentiment of regard for national integrity, perieates the House of Representatives and every American citizen.

(The "friend from West Virginia" was troubled by some constitional scruples, which Mr. Blount stated he had never heard "raised ut once before," when they were "elaborately presented by the attorney f the claimants under this fraudulent award to the Committee on Forign Affairs." This was the only voice raised in opposition, and that id not appear in the vote, which was unanimous.)

* * * This testimony discloses all along, through its suggestions on the part of very person connected with these claims, of a conspiracy to defraud the Venezuelan overnment. I do not think that any gentleman who will examine this matter can scape the feeling that there was gross fraud committed. Committee after comittee of Congress has uniformly so found. Yet these parties are here to-day, using ll the influence they can outside in the various branches of the Government, makg argument on the ground of vested rights.

Sir, the people of this country have some rights. The Government of the United tates has a position to maintain among the nations of the earth; her dignity and er honor to be upheld. (Cong. Record, Jan. 18, 1883, pp. 38–47.)

Mr. Rice, of Massachusetts, the chairman of the subcommittee, in losing his speech upon the presentation of the report of the committee o the House, said:

Talmage declared that he had about $6,000 or $7,000 worth of these certificates of ward and no more; while Murray said that he himself had sold to Talmage some 9,000 worth. That is contained in the report which was read this morning. eyond this, Talmage was asked "Why are you here interesting yourself in these atters, having, as it appears, no personal interest in them yourself?" and he replied, 'I am here as an attorney; I am paid to be here. * * * I was paid by Benj. L. wann." "Where does he live?" "In New York City; I was paid by him and *thers associated in the claim of Jacob Idler.*" "How much did he pay you?" "I think ll together about $10,000 or $12,000."

Now, Mr. Speaker, what said Benjamin L. Swann when these questions and answers ere read to him? "I never paid him a cent of any kind for any purpose or in any anner, form, or shape; not a cent." * * * "Who, then, did pay you?" Talage was asked, as a final corner question, with reference to his employment here. nd who. Mr. Speaker, of all the world, was the one, according to his own testiony, by whom this money was paid to Talmage to appear in Washington? William . Whiton, his alter ego, for whom he took out the claims to Caracas, and for whom brought back the certificates of award.

Thus far Mr. Rice.

In this connection, however, it may be well to refer to the te of this William H. Whiton, that we may discover how a railro tractor" who, when asked "What has been your business since t answered, "From the 1st of July, 1867, to the 1st of July, 187 resented my brother, who is now dead, in the business of ma ing white-lead paints," in New York City. How he, Whiton interested in the business of prosecuting claims before an inte mixed commission. In answer to questions before the com the Forty-fifth Congress he says: "I quietly slipped over here ington and investigated the Idler claim, and was told at t Department that if there was an honest claim against the Go of Venezuela it was the Idler claim," etc. And when asked, "W son in the State Department told you that?" answered, "I entirely certain who it was, for I saw two or three of the offici Department at that time, and which one of them made the r that time I can not say. That remark was impressed upon me. a partial recollection that Mr. Hunter made that remark to n am not entirely certain whether it was Mr. Hunter or some o tleman who explained a good deal to me about the Idler claim." Mis. Doc. No. 11, Forty-fifth Congress, second session, pp. 5, 2 in previous evidence it appears that this Mr. Whiton forme "on the heights of Georgetown." (H. R. Rep. 787, Forty-fou gress, first session, p. 105.)

We leave these early facts, and subsequent matters corre them, to such inference or inquiry as they may properly sugg

To continue the remarks of Mr. Rice, of Massachusetts:

> I do not know David M. Talmage [the United States commissioner]. I him to my knowledge; but I say that I find him in the first place in relations with a man in New York to whom very large awards were ma self; I find him insisting upon a single man as umpire, which man wa large claimant, who was the owner of a large claim afterwards presented commission; I find him, as I believe, abandoning that candidate to secure t ment of his own confidential friend and attorney; I find him denying his of the certificate of award; I find him, when the certificates are trace possession, unable to explain where he got them; I find him affirming t employed to represent the Venezuelan claimants before a committee o when these claimants denied that they had ever employed him; I find l mending claimant after claimant to the man Whiton, whose attorney h with whom, it is charged with probable truth, he divided at last the aw he himself made. I find him thus covered all over, as it seems to me, w of suspicion and fraud, and I am unwilling for one to allow him to re honor of my country in an international commission, established for t settlement of claims between our citizens and the Government of Venezu therefore, Mr. Speaker, that this matter may receive such consideration a of this House *as shall put it to rest forever*. (Cong. Record, Jan. 18, 1883,

And the House passed the joint resolution unanimously.

The Senate concurred unanimously.

And the President approved the action.

Nearly three years have since passed and the law is yet un It is now nearly twenty years since the treaty was promulg we are still without a legal tribunal under it.

The matter appears to have become stranded in the Depa State.

The sands upon which it was chafing there in January las closed to us in the papers accompanying a brief message of t dent of January 27, 1885.

The published papers consist of the correspondence of Mr. huysen, Secretary of State, with Señor Camacho, the Ve minister.

As it is apparently impossible for us ever to have a tribunal under the treaty of 1866 that can give judgment on our claims, unless the contentions developed in that correspondence are disposed of, we respectfully ask, in view of our large interests dependent on the speedy execution of the law of 3d March, 1883, permission to present some views upon the questions there raised.

The delay the questions have occasioned may give hope to the conspirators; may not, considering the positions taken, be unwelcome to Venezuela; but it effectually bars, at present, the road to adjudication and justice against the claimants who did not enter into the conspiracy. We therefore feel that we have a right, at this juncture, to a hearing upon those questions in the Department of State.

The questions raised by the correspondence may be stated as follows:

1. Has "the proposal contemplated and authorized by the joint resolution" been practically declined by Venezuela?

2. Are the *seventeen* awards made by the assent of the Venezuelan Commission (Villafane) undisputed?

3. Whether undisputed or not by the Venezuelan Government, ought they not to be held to be without *judicial sanction*, by reason of the corrupt interest in them held by the members of the commission and our minister?

5. Are any vested rights to be disturbed by the appointment of a new commission?

5. The question of *bona fides*.

6. What is the power of Congress in the matter?

We will consider the questions in their order:

Has the proposal contemplated and authorized by the joint resolu-
on been "practically" declined by Venezuela?

On the contrary, it appears to us to have been accepted, pure and
nple.

Turning to the correspondence accompanying Mr. Frelinghuysen's
ter, we notice that the Venezuelan minister in Washington, having
ited (though in sore bodily affliction) for quite a month after the
journment of Congress for the Secretary of State to "open diplo-
tic correspondence" with him, as the Secretary had been advised to
by the public joint resolution, he sends a humble personal note to
. Frelinghuysen, in which he begs the Secretary to appoint at his
liest convenience a day in which they "may give practical power to
public resolution of Congress."

Although no response from the Secretary to that request appears in
correspondence, a subsequent note of the Venezuelan minister refers
an interview which the goodness of the Secretary granted him on the
h of March (two days afterwards) "to exchange ideas, which we did
to the manner of carrying into effect what Congress had ordered;
t interview, in which both parties showed themselves in accord with
t public resolution." And in the official note containing this refer-
e (April 22, 1883) the minister incloses a draft of a protocol certainly
ering, as we read it, with great exactness, the field of the joint reso-
ion. On the next day (April 23) he repeats his expressions of anx-
y for the fulfillment of the public resolution.

t is very evident from the correspondence that the difficulty has
been that Venezuela was not ready, willing, and anxious to accept
terms of the joint resolution, pure and simple. One difficulty
pears to have been her too great readiness. Her minister in Wash-
ton was, it would seem, guilty of a quite unpardonable presumption
en he exhibited knowledge of the wide-spread fact, which everybody

was entitled to know, and bound to know, except himself, tha Congress had passed and the President approved a joint resolutio taining a proposal for the settlement of the long-vexed questi Venezuela's obligations under the proceedings of the old corrupt mission. He did not feign to be ignorant of that fact till such ti the late Secretary of State might deign to communicate it by o note, the official "interview" and "accord" on the 28th of M which is not denied, being deemed insufficient to dispense wit solemn formality of an official note.

The next difficulty evoked was that Venezuela did not contin make payment upon the old awards. Now, as Venezuela had al as we understand it, protested *not against the binding force of the t* but *against the binding force of the corrupt proceedings* under it, an Government of the United States had admitted publicly that th demanded a new commission, the proceedings of which should substitute for the old and a cancellation of its determinations a certificates, and the Government of Venezuela at once tender assent, upon what principle of justice or duty could continued pay be demanded?

Had Venezuela declined to revive the general stipulations treaty of 1866, or unreasonably delayed her assent to a new co sion, the case might assume a different aspect. The facts present the correspondence do not call for the consideration of such a ca

(In this connection it may be well to state that the fact that M under the treaty of July 4, 1868, the decisions under which includ Key and La Abra cases, continued to make payments, while pr ing that the awards in those two cases were procured on *testimon* was perjured, affords no precedent for requiring such continue ments in the case of Venezuela. The *tribunal* that sat in the and La Abra cases was acknowledged by both parties to be a pr organized, disinterested, competent, pure court; not one "practi admitted by both parties to be a conspiracy organized for and su fully executing its purposes of plunder.)

On the 11th of June, 1884, *more than a year and three months* aft passage of the joint resolution, we find the first definite propo of any kind by the late Secretary of State, and that was pres under reservation. Mr. Frelinghuysen then submitted the draf convention containing, besides the recital of the full text of the resolution, no less than seventeen articles.

The document becomes thus elaborate in its effort to go far b the clear advice or direction of the joint resolution and set up an sibly international tribunal, but one charged not only to dete claims against Venezuela, but to settle imagined possible que *between private parties* as to the *bona fides* of their transactions i certificates of the corrupt commission at any time "prior to the d the exchange of ratifications" of the proposed convention. If Article XI of the Secretary's proposed convention Venezuela di find herself made liable to pay, under the *bona fide* possession c the whole amount of all the "money awards" which, under the othe visions, the commission might "annul," it would only be because to the ratifications" the corrupt holders of these fraudulent certif lost their cunning, and, at the hearings before the new commission, capacity for perjury.

But Article VIII of the Secretary's proposed convention, whi its terms is, seemingly, least objectionable, in fact covers (not i tionally, of course, but none the less securely) a large part of the c

ates held by Commissioner Talmage and Minister Stilwell, and very ittle else.

If the Government of Venezuela did not object to this, the Govern- ıent of the United States surely should object. It has done so by its ›int resolution—very properly objected to being any longer the dis- ributor of moneys in furtherance and completion of the adroit schemes f the conspirators.

Let us look at the facts in respect to those awards which the late ecretary of State so frequently referred to as the "seventeen undis- uted cases."

2. Are the *seventeen* awards, amounting to $459,188.30, made by the ssent of the Venezuelan Commission (Villafane), undisputed?

One of the seventeen is the award to Seth Driggs of $100,000 on laim No. 11. That claim was specifically objected to, among others, in letter from the Venezuelan minister (December 24, 1878), which the ecretary of State quotes in a communication sent to Congress May 25, 882. (House Ex. Doc. No. 208, Forty-seventh Congress, first session.)

This not only takes at once $100,000 out of the amount Mr. Freling- uysen claims to be undisputed, but shows that Venezuela *has not onfined her protests to the awards of the umpire.*

As we understand the position of our debtor, Venezuela, drawn from he published correspondence, it is this: That while laying special tress on the conspicuous iniquity of the umpire awards, and at first ot supposing her own commissioner involved in the conspiracy, at ast, through the investigations had in Caracas and here, became onvinced that he, too, was not without culpability; that the whole roceeding, from the appointment of the umpire down to the distribu- ion of the certificates, was tainted, corrupt, and only deserving com- lete expungement. In this view certainly all the awards may be said o be disputed.

And this brings us to the consideration of another and a more nportant view of this part of the matter.

3. Whether these seventeen (or sixteen) mostly small, but including ome of the largest, awards be undisputed or not by the Venezuelan lovernment, ought they not to be held to be, by our Government, *with- ut judicial sanction*, by reason of the corrupt interest in them held by he members of the commission and our own minister?

Not only should we think the Government of Venezuela justified in aking the position that they are without such sanction, but our own lovernment, in vindication of its freedom from connivance at and sup- ort of the frauds of its commissioner and minister, should object to aving the present condition of those cases considered *an adjudication.*

Whatever sanction the original claims may have by reason of the oluntary admissions of Venezuela would follow them before the new ommission. There is certainly more just force in such an admission by 'enezuela than in the assent of a corrupt commission.

The facts drawn forth by the resolutions of inquiry passed at the last ession of Congress, collated with those before obtained, enables us to, artially at least, analyze the present situation of those seventeen wards.

We have long known, from the evidence taken, that the United States ommissioner and minister secured, before the commission issued its ertificates, a *one-half interest* in those claims, and drew all the certifi- ates for the same. We now perceive that not only in the case of Seth riggs did the United States commissioner appropriate *all* the certifi- ates (made "payable to bearer") issued in representation of the awards ade to him (Driggs) by the two commissioners, on four of his claims,

amounting together to $150,000, as *his* (the United States commissioner's) *share*, giving to Driggs only those other certificates representing the awards of the umpire as his part (H. R. Rep. No. 787, Forty-fourth Congress, first session, p. 59), but that by the same shrewd trick, in certain anticipation of an uproar about the umpire awards, the same course must have been pursued in quite all the other cases.

The table of claims, certificates, payments, etc., furnished at the request of the House, by the Department, during the last Congress (H. R. Ex. Doc. 174, Forty-eighth Congress, first session, on June 3, 1884), if carefully studied, throws some light on the devious ways of the conspirators, and shows how *they* now stand as the holders of quite all the certificates representing these so-called "seventeen undisputed claims."

It reveals much in respect to the deep interest in these *seventeen* "undisputed cases." Not in respect to the $1,742.63 and $2,000 cases that, included, swell the enumeration, but as to the $100,000 and $150,000 cases, wherein the conspirators, not the original claimants, hold their great interests.

The Seth Driggs's commission certificates we know, from the testimony of Driggs (in this undisputed), were *all* kept by Talmage. We need not, therefore, be curious as to the bank agencies through which he may have collected his installments, or in what hands he may have afterwards placed them to subserve purposes of his own. These specific claims of Driggs have become, by Talmage's appropriation of the certificates representing them, not the claims of Driggs, but of Commissioner Talmage.

The *seventeen* so-called "undisputed cases," then, stand, in fact, as follows:

The Seth Driggs claim:	
No. 11	$100,000
No. 19	12,000
No. 21	16,000
No. 32	22,000
	150,000

The *commissioners'* certificates ("payable to bearer") for these four claims *all* appropriated by Talmage as a part of his share.

The Ralph Rawdon claim, No. 27, $100,000.

The first installment on *all* the certificates for this claim (commission certificates payable "to bearer") were drawn by William H. Whiton, Talmage's alter ego.

The second installment, on 33 out of the 40 certificates issued for this claim, were drawn by Henry Whiton. The installments on the remaining 7, through a banking house.

Here we have a grand total of a quarter of a million ($250,000) dollars represented in these so-called "undisputed cases" appropriated by and permanently in the hands of the arch conspirators.

The drawings of the installments further show that the conspirators and their immediate representatives, Walter S. Johnson, receiver of the First National Bank of Anderson, Ind., of which Minister Stilwell was president; John A. Stein, the attorney for Stilwell and Talmage, and the said William H. Whiton or Henry Whiton, still have a part interest in the following awards:

The Leonardo Peck claim, No. 4	$25,000
The Narcissa de Hammer claim, No. 24	50,000
The Amelia de Brissot claim, No. 25	35,000
The Joseph Stackpole claim, No. 26	15,000
	125,000

As to the two awards for the De Hammer and the De Brissot claims, ıe evidence discloses some remarkable proceedings. In the De Hammer ıse the Government of Venezuela, it appears, had, before the sitting ' the commission, voluntarily given the woman $25,000 in orders on ıe custom-house at Angostura, in part settlement of her claim. Murray ›t her power of attorney and an assignment of a half interest in any vard that might be made. The claim was put in for $100,000. The ›mmissioners awarded $50,000 and canceled the custom-house orders. urray, the bogus "secretary of legation," then pocketed, in behalf himself and the United States commissioner, the one-half ($25,000), ıd thus left the widow considerably worse off than the Government ' Venezuela had left her. (H. R. Rep. 787, Forty-fourth Congress, st session, p. 58.) Behold the showing on the papers. The commis- ›ners take credit for "rejecting" $50,000 of her claim. Award "the ›or widow" $50,000, then pocket one-half, $25,000. Cancel her $25,000 custom-house orders theretofore given her by her Government, and us make her a party interested in sustaining their iniquity. The ırallel to that feat certainly can not be found elsewhere in judicial ›ceedings, international or otherwise.

In the De Brissot case there appears to have been a failure of an old lage. Murray and Palanzuela did fall out, but the Widow De Bissot d not get her due. (Vide Ibid., p. 129.) And "Statement B," in H. R. x. Doc. No. 174, Forty-eighth Congress, first session, shows that "a ›rtion of these (De Brissot) certificates eventually turn up in the estate ' Mr. Stilwell," our ex minister.

Thus it appears that of these seventeen so-called "undisputed cases"— Five awards thereon, representing $250,000, went *wholly* into the ands of and *were retained* by the conspirators.

Four of the awards thereon, representing $125,000, are in part, *whether larger part than the original one-half* we know not, still in the hands ' the conspirators, and that, as to the remaining,

Eight awards, representing only $74,188.30 of the grand sum total to hich reference is made, we have only the evidence of the original *one-ılf interest* held by the conspirators under their agreements and powers ' attorney.

The original claimants in these "undisputed cases" appear to have sappeared. The mask is left, and looking behind it we discover the ›nspirators in complete representation and full force. Are they cases ılling for subtle diplomatic statement or argument in their protection ;ainst a rehearing, so far as the original claimants are interested, ›fore a new commission formed under the law of March 3, 1883? ıould they longer be permitted to bar the right of the "Aspinwall" ıd "Railway of the East" claimants to an adjudication before such a ibunal, especially when, so far as the *original claimants* are concerned, ıeir rights would be equally protected by that tribunal?

4. Are any vested rights to be disturbed by the appointment of a ›w commission?

This question has passed beyond the field of argument.

In the Key and La Abra cases (110 U. S. Reports, p. 63), January 7, 84, the Supreme Court decided that the awards made by the commis- on that sat under the treaty with Mexico of July 4, 1868, did not vest ı absolute right in the respective claimants to the amounts awarded ı their respective claims. And this decision was reached notwith- anding the treaty with Mexico declared not only that the decisions the commissioners should be "a full, perfect, and final settlement,"

and that the *contracting parties would* "give full effect to such decision without any objection, evasion, or delay whatever."

If sounding tautological expression could vest a right *in the individual claimant*, under the decision of an international tribunal constituted as these commissions have been, those words would surely accomplish the purpose. But the court held they did not. And so held, notwithstanding Congress had passed an act by which the Secretary of State was "authorized and requested" to "distribute" the moneys received and then in his hands "among those in whose favor awards had been made." (20 Stat., 144, ch. 262, sec. 1.)

And under the Mexican treaty there was no question going to the integrity of the organization and decisions of the tribunal. The only question was whether the tribunal had not been imposed upon by perjured testimony.

5. The question of bona fides.

At the outset it may be said that notwithstanding the early suggestions of the conspirators that their novel scheme of issuing the certificates payable "to bearer," and in denominations so small that they might constitute a convenient circulating medium to "facilitate transactions" had been successful in placing them where, as one of the conspirators expressed it, they "would do the most good," no evidence of the truth of the conjecture that any of them had gone into the hands of bona fide holders had during all the past years been brought to the notice of Congress or of the Department of State, so far as can be learned from the published correspondence.

On the 25th of May, 1882, not quite a year before the joint resolution was passed, the then Secretary of State expressed the opinion that "some *may be* and *probably* are in the hands of innocent holders" (House Ex. Doc. No. 208, Forty-seventh Congress, first session, p. 5). But at that time the only "innocent holder" the published correspondence of the Department in respect to the certificate had disclosed was Messrs. Orth and Talmage's mythical "Thomas Brown."

Now, quite immediately preceding the late Secretary's last letter on the general subject, January 27, 1885, there was introduced into the House of Representatives January 6, 1885, the petition of Ralph S. Demarest, which, on a first reading, might lead us to suppose that at last there had been found a man to swear that he is an innocent holder of some of those certificates.

We have read and reread with care this evidently labored petition. It is very lengthy. It would indicate that the petitioner from Bergen County, N. J., had made an exhaustive personal examination of the entire field of diplomatic controversy attending the case and the legislative action upon the subject before he made a trade of "purchase money mortgage" for some of the certificates "in *the year 1877*," and that the trade was made on the faith of what he calls the "finality act of 1873."

The petitioner compliments Mr. Seward and Mr. Fish upon their dispatches (written *previous* to the thorough investigation upon sworn testimony, commenced by the House of Representatives May 20, 1876). He notes the manner in which they meet the representations, then without proof, but since proven, of Senor Munoz-y-Castro, and the, therefore, at that time, untenable position of the Government of Venezuela—in fact, reviews with the skill of a trained diplomat the whole antecedent field of discussion—and, in judicial language, announces the force and effect of the treaty and the laws of Congress.

But how did it happen that in this wide, profound, and critical

ccrutiny of the departmental correspondence he overlooked what to he petitioner should have been, if he thought of becoming a bona-fide iolder, the most important paragraph in the long dispatch of Mr. Fish f July 23, 1875 (published July 31, 1876, H. R. Rep. 787, Forty-fourth Congress first session), the year before he made his "trade?" Of ourse the petitioner must have read this identical dispatch before he nade the "trade," for he swears that he did, and states that "your etitioner found in the dispatch" certain paragraphs which he quotes.

Did the petitioner overlook this loudly warning paragraph in that lispatch, id est:

By the terms of the treaty, the money awarded by the commission is payable to he Government of the United States. It is a debt due by the Government of Venenela to the United States, *not to any particular citizens of the United States.* It is one ggregate sum, not a variety of separate indebtednesses, *some of which may be distinuished and segregated from others.* (Vide utante, p. 44.)

Did this late but widely read petitioner also fail to see the joint resolution of the Forty-fourth Congress, passed in 1876 (the year before ie made his "trade"), suspending the payments of installments on the wards?

Did he fail to recognize the odor in the air of the corruption stirred y the investigation commencing in 1876, and which during the latter part of that year and also through the year 1877 was diffused over the greater part of two continents, it being especially rank along the Hudson and Hackensack rivers and upon the tributaries of the Wabash n North America?

But perhaps not the least of the omissions of this recently discovered bona fide petitioner is his omission to state anywhere that he was, t the time of the presentation of his petition, the owner of a single certificate, either as a bona fide holder or otherwise.

His omission to state from whom he received certificates may be xcused on the ground of delicacy in respect to private "transactions;" is failure to give the exact date of the transaction in the year 1877 night be a mere possibly fortunate inadvertance in case of a close nvestigation; his neglect to inform us of the value of the "purchase noney mortgage" may be the result of a careful personal reason as to he worth or worthlessness of his mortgages that may have been taken ack in part payment for lands sold on a new railroad line, at town-lot rices, and since returned abandoned to their original condition of cattle pastures; his avoidance of any casual mention of the number or umbers of his certficates, the amount stated on their face, or the name f the claimant to whom they were originally supposed to be issued nay have been owing to the absorbing interest he exhibits in the generally applicable diplomatic and legal questions which he assumes are nvolved; but how can we excuse this late and voluble petitioner for is neglect to inform us that he was, at the time of swearing to his etition, the owner or holder of any certificates whatever?

The "Thomas Brown" bona fide holder of ten years ago was proved o be a myth, and the "certificates" of the present Demarest would eem to be quite as mythical. Yet these are the only "possible" bona ide holders evoked by the conspirators, or the expressed fears and olicitude that have found their place in the correspondence relating to he subject.

Must the way to the adjudication of just claims be barred by such hantoms?

If there shall ever be discovered a bona fide holder of any of the raudulent certificates, his rights can certainly be protected in the

future by the ordinary processes of the law, as all moneys upon a by a new commission *must be paid into the Department of Sta* may there be held in cases of contention, if any, subject to the e of the parties interested therein, or they may be properly settled usual way by our courts.

6. What is the power of Congress in the matter?

Upon the authorities and precedents, we would say most abs

Were the determination of the commission a judgment, unimp on the ground of fraud, even when the Congress would have the certainly by a two-thirds vote, to remit the judgment or restrain its enforcement, the "*particular citizens*" of the United States no vested right in it. (Key and La Abra cases, 110 U. S. Rep. Jan. 7, 1884.)

And the well-settled rule is that an act of Congress passed quent to a treaty is, *for all citizens and executive officers*, the the land.

When, in 1858, the force and effect of the Clayton-Bulwer trea under discussion, Mr. Cass being Secretary of State, he informe Napier that personally he (Mr. Cass) was in favor of a naked, u fied repeal of the Clayton-Bulwer treaty, without conditions, a such repeal should be effected in the form of a treaty, though he with a certain deprecation to the contingency of "the dissolution treaty by act of Congress."

And in 1880 Mr. Evarts, Secretary of State, in a communica respect to an investigation of the Key and La Abra claims, sa "the authority for such an investigation must proceed from Con and advises that the question "be laid before Congress for the e of their *plenary authority* in the matter."

As we understand the situation, neither the Venezulean Gove nor our own has ever expressed a wish to avoid the binding forc treaty of 1866. But both Governments have very practically d against the enforcement of the fraudulent determinations of t spiracy that was organized under it.

We therefore would most respectfully call the attention of the I ment of State to the consideration of what we deem the privileg to us, if not the right, to have speedily organized in precise cons with the provisions of the law of March 3, 1883, a new mixed c sion, before which our claims and all others presented before the commission may be brought for adjudication.

The debtor Government having conceded our right to such a tr our Congress and the Executive having declared that such a t ought to be organized, we can conceive of nothing that can be interposed the effect of which shall be to retard or defeat the ex of the declared purpose of both Governments in a matter so affecting our rights.

Your most obedient servant,

HENRY WOODRUFF,
Of Counsel for the "Aspinwall" an "Railway of the East" Claim

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Mr. Bayard to Mr. Woodruff.

DEPARTMENT OF STATE,
Washington, November 14,

SIR: I have received your letter of the 10th instant in rela providing, in accordance with the advisory request of the joint

ion of Congress approved March 3, 1883, a mixed commission for the hearing of the awards of the late commission of Caracas, which shall ave power to examine also cases not passed upon by that commission, nd to which class of cases those you represent belong.

So far as such cases are concerned, I have pleasure in informing ou that the minister of Venezuela is understood to assent to the proposi- ion contained in Article XIII of Mr. Frelinghuysen's draft convention, hich includes in the new submission any American claims pending on he 30th August, 1867, and not presented to the Caracas commission.

The greater part of your communication touches questions of treaty egotiation between the United States and Venezuela, which I may not roperly discuss except with the diplomatic representative of that overnment.

I am, sir, your obedient servant,

T. F. BAYARD.

Mr. Woodruff to Mr. Bayard.

WASHINGTON, D. C., *November 14, 1885.*

SIR: Since leaving at the Department of State my letter of the 10th istant on the subject of the execution of the purpose of the joint reso- ition of March 3, 1883, I have been informed that "Mr. Machett" hose exact relation to the Venezuela matter even the investigating ommittees could not find out) has stated that the matter had been eferred to Mr. Adee for his opinion, and that he had written one to he effect that the joint resolution was merely "advisory."

As Mr. Machett's advices have heretofore been found to be, at least n respect to what was transpiring or about to transpire in the Depart- ent of State, of a reliable character, having been especially so in espect to the drafting of the "bill," in the Department, that was after- ards submitted to the Committee on Foreign Affairs of the Forty- eventh Congress, providing a scheme for sending the matter to the ourt of Claims where, an eminent jurist then in the Department and ow in that court was soon to follow, I am not permitted to doubt the resent statement.

Mr. Adee's opinion, however, of the merely "advisory" character of he joint resolution, and of the advisability of "the Government" not ccepting the advice, expressed in the form of a law, passed by the nanimous voice of the House of Representatives and the Senate, and pproved by the President, has never, I believe, been a subject of oubt. It has been well known that, in his view, the legislation of ongress and the approving signature of the President, in respect to a uestion having any bearing upon international concerns, must be orn of all pretensions, and be deemed and held by "the Govern- ent" to be an entirely "municipal" affair. Though *both branches of he treaty-making power* may have joined in that legislation, it has, it ould seem, in that view, received some taint from the joinder of the ouse of Representatives therein, that makes the action, though asked r by the President, an impertinent offense to "the Government."

Having been accustomed to regard the House of Representatives, the enate, and the President, when all acting unanimously together, as a rge part of the Government of these United States, I am unable to nceive why their joint determination, expressed in the form of a law, hether considered as a law or as advisory, should not be acted upon

according to its terms by the officials properly charged with its execution. When such action, within the limits designated by the legislation so approved by the President, could but result in a good understanding with a foreign power, in satisfaction to those having honest demands against that power, and in leaving to the courts, where they belong, the determination of all questions of right between citizens, why should not that straightforward course be taken?

In view of the declaration of our Supreme Court in the Key (Weil) and La Abra cases (U. S. Rep., 110, p. 63) that "international arbitration must always proceed on the highest principles of national honor and integrity," what a satire the proceedings in this Venezuela business have thus far been.

Very respectfully, your obedient servant,

HENRY WOODRUFF,
Counsel for the "Aspinwall" and "Railway of the East" Claimants.

Mr. Woodruff to Mr. Bayard.

NEW YORK, *November 20, 1885.*

SIR: I have the honor to acknowledge the receipt, on my return to this city, of your favor of the 14th instant, informing me of the consideration given to my communication of the 10th instant.

That there may be no misapprehension, permit me to say that the position of my clients is not that of parties whose claims were "not presented" before the body that sat as a mixed commission under the treaty of April 25, 1866, with Venezuela. Their claims were presented, but no corrupt bargain having been made for their consideration, they were, in the language of the docket, "dismissed, but in no wise invalidated by such action on the part of the commission."

The assent of Venezuela may well be presumed to the proposal contained in Article XIII of Mr. Frelinghuysen's draft convention of June 11, 1884, as in the letter of Señor Dalla Costa to Mr. Fish, written some nine years ago (December 14, 1876), he expressly states that "it is only desired that a new and competent commission shall be appointed under that treaty, and the Government of Venezuela will, for that purpose, if necessary, formally agree to the extension of all its provisions." Thus it appears that the fears that Mr. Frelinghuysen expressed shortly after the passage of the joint resolution of March 3, 1883, that if the proceedings of the old commission were held to be void Venezuela would never assent to another commission, were groundless. Perhaps, however, they may have arisen from his never having had called to his attention, by those specially familiar with the very voluminous departmental correspondence in this matter, that portion of Señor Dalla Costa's letter.

Any revival of the general stipulations of the treaty that provided for the adjudication of claims that were presented under it would, necessarily, include those I represent, whether that revival were accomplished by diplomatic notes or by the submission to the Senate of a supplementary article embodying the applicable provisions of the joint resolution, to which the Senate has already given its advice and consent.

Be assured that I have not the temerity to seek discussion of questions under treaty negotiation with the Government of Venezuela. My purpose has been to bring into the light certain facts that might at

present be of service in the solution of questions raised by the published correspondence of the past.

My clients having become aged and weary (and some of them dead) during the nearly twenty years of diplomatic discussion about the collection and distribution by the Government of the "plunder" of the old commission, they certainly have no interest in prolonging debate.

The sole desire of the survivors is for action in accordance with the law, or "advice" of the Congress and the President, jointly given. Knowing no higher source for the derivation of either law or advice, or any more solemnly charged with the protection of the honor of the Government and the rights of the citizen, they have now the hope that their rights may be speedily secured, and the honor of the Government, divorced from the dishonor of the commission, be watchfully guarded.

I remain, very respectfully, your obedient servant,

HENRY WOODRUFF,
Of Counsel for the "Aspinwall" and "Railway of the East" Claimants.

Vide: As to "plunder," Stein's letter to ex-Minister Stilwell, October 27, 1873. (H. R. Forty-fourth Congress, first session, Rep. 787, p. 197.)

Mr. Hunter's expressed views in 1869. Carey to ex-Minister Stilwell, June 14, 1869. (Ibid. Doc., p. 188.)

For information and advice to Mr. Talmage by subordinates in State Department in 1870, Mr. Talmage to Mr. Stilwell, October 23, 1870. (Ibid. Doc., p. 195.)

Mr. Woodruff to Mr. Bayard.

NEW YORK CITY, *March 31, 1887.*

SIR: The recent mails from Caracas bring the newspapers of the 8th instant of that city containing the message of President Guzman Blanco, delivered on the 7th instant to the Venezuelan Congress. The Department of State has, doubtless, more direct advices.

According to the statement of the message, the ratifications of the treaty of the 5th December, 1885, in respect to claims, have not been exchanged, because President Blanco thinks he perceives a possible conflict between the requirements of the treaty, for payment within ten years of the awards that may be made by the new commission, and the subsisting agreement in reference to the application of a certain percentage of the revenues to the discharge of the diplomatic debt.

If the arrangement in reference to the diplomatic debt was considered as subsisting at the time of the negotiation of the treaty by the high contracting parties, and is controlling in its provision for payments, it is surely much to be regretted that the question did not then receive due consideration. And if there is now anything of reasonableness in the position assumed, because of the possible attitude of other powers interested in the revenues of Venezuela, may not my clients, as *parties most deeply interested in any just settlement that may be made*, suggest that they would be satisfied with any demand of payments, under the treaty, that secured the semiannual interest upon the awards that may be made and resulted in the extinguishment of the principal in even fifteen or twenty years.

Had the treaty been ratified without the raising of this question, it is not probable that we would ever have received more than came to us, yearly, under the arrangement in respect to the percentage applicable

to the diplomatic debt. May not the matter, therefore, be proper concluded under an engagement that, whatever may be the decisions the commission, the yearly demands shall not be in excess of the pr vision now made or that may hereafter be made, with the consent this Government, in respect to the diplomatic debt?

The results of the labors of the commission may not (and if Ve zuela's contention, in which she should have faith, be just, will n raise at all the question of "conflict" suggested by President Blanc but should they do so, might not Venezuela be assured, in advan of the forebearance the circumstances would then demand, in view engagements made in respect to the diplomatic debt?

If the question now raised should be regarded as a mere pretense might be well to deprive it of all apparent reasonableness. If it is be looked upon simply as another of the unfortunate diplomatic dif ences in the Venezuela business that have so long postponed the rigl of those claimants who declined to join the corrupt and corrupting c spiracy, we can only pray that it may not be, as too many of them he tofore have been, coincident with an advancement of the interests the original conspirators and their subsequent "bona fide" allies.

President Blanco's reference to the Russian minister, in connecti with the designation of the third member of the commission, is certai most ungracious. He must have forgotten that the documentary hist of the appointment of the umpire of the former commission shows t it was not made until it was known that the Venezuelan selected w acceptable to the representative, here, of his Government, as well a our Government, that, then, through its Department of State, kin furnished the Christian name of the "Machado," and the "junic suffix, that there might be no mistake! Surely greater precauti could not have been taken.

Very respectfully, your obedient servant,

HENRY WOODRUFF,
Of Counsel for the "Aspinwall" and "Railway of the East" Claimants

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Mr. Bayard to Mr. Woodruff.

DEPARTMENT OF STATE,
Washington, April 8, 1887.

SIR: I have to acknowledge the receipt of your letter of the 3 ultimo, in reference to the claims convention of December 5, 1885, w Venezuela.

I am, sir, your obedient servant, T. F. BAYARD.

Mr. Woodruff to Mr. Lamont.

NEW YORK CITY, *April 29, 1887*

SIR: You can, and I trust will, bear witness that I have not sou to trespass upon the time of the President, although I have a tolera fair claim, as one of the many nonoffice-holding and very "independ Democrats" who insisted on his nomination, to at least equal conside tion with all other good citizens having business with the Executiv

To-day I have written to the President on a new phase of the Vene-
elan question. It has become imperative that he should be thoroughly
formed upon the subject. If he works down through all the perver-
ns of our language as well as the law, by the commissioners and the
plomatists, to the bottom facts, I am confident that all honest parties
ll be satisfied with his determinations in the case.
You had (and may have pigeonholed) a copy of my letter of Novem-
r 10, 1885, to the Secretary of State. When the Venezuelan treaty
s before the Senate, the Department, upon call, furnished the Senate
ch a copy. I should feel much obliged if you would place the copy in
ur possession before the President. That letter is a condensed
iew of all the points in the field of controversy.

Respectfully, yours,

HENRY WOODRUFF.

Mr. Woodruff to the President.

NEW YORK CITY, *April 29, 1887.*

The exigency created by the position assumed by the President of
nezuela, in his message of the 7th ultimo in respect to the ratifica-
n of the convention of the 5th December, 1885, together with the con-
erations we now propose to disclose, must vindicate and justify this
peal.
n full consciousness of the gravity of the accusation that may be
plied from the statements and references we may make, we shall pro-
d to the discharge of what we sincerely believe has become a duty to
Chief Executive as well as a necessity for the protection of our
hts.
When that exceptionally accomplished minister to Venezuela, the
n. James R. Partridge, had returned to this country and made his
sonal report to the Department of State upon the abominations of
mixed commission of 1868, his revelations must have been most
welcome to the Bureau charged with Spanish-American affairs. In
etter of his, now before us, he says: "I presume nothing can prevent
t consummation" (the distribution of the moneys in the hands of the
retary of State) "of the wishes of Talmage & Co., except a direct
peal to the President, who, if he knew *all* the facts, could never con-
t to it. The appeal to the President ought to be made."
The Department of State as then constituted had no further use for a
nister of his rigid fiber at Caracas. The letter bears date the 18th of
y, 1871. The next morning Mr. Partridge, who had already engaged
return passage to Venezuela, awoke to find himself gazetted min-
er to Brazil. He could not be discredited; he could not be degraded,
he could be promoted—and never forgiven.
The Spanish-American Bureau in our Department of State has been
ewdly managed these many years—so shrewdly, indeed, as to sug-
t that it has profited by lessons in the alleged efficient characteris-
of the diplomacy with which it has been its duty to contend. A
usal of many of the communications of former Secretaries of State
st lead anyone thoroughly informed as to the facts to be found in
record to the conclusion that the Secretaries, unversed in the
nish and relying necessarily upon translations and abstracts, have
n kept quite as much in the dark as the Presidents have been.
We violate now no confidence in saying that the investigators, who,

with power to send for persons and papers, explored the conspira that culminated in the awards of the commission and the exclusion the claimants not in the conspiracy, arrived at the conclusion that the was some one connected with the Spanish-American Bureau in th Department of State that was deeply involved in the conspiracy th was organized at the time of the formation of the Venezuelan Mixe Commission, and that has been, by due and "bona fide" succession, ke on foot ever since.

From the complicity in the appointment of the insignificant an subsequently infamous umpire all through the long history of th scandal down to the repeated attempts to defeat the clearly state purpose of the joint resolution of March 3, 1883, which was passe unanimously by the Congress, and approved by your predecesso some power in the Department of State has made its influence in favo of sustaining the fraud and distributing the plunder constantly felt In a mild way that power recognized the unanimous expression b joint resolution of the House of Representatives and the Senate, an the approval of the President, as "advisory," but caused it to be ver distinctly understood that the inspiration of its diplomacy was no drawn from that source. The humble citizen of the Republic who ha been taught to think of the House of Representatives and the Senat and the President, all taken together, as constituting a large part o the Government of the United States, must revise his opinion when, in the presence of the Secretary of State, a third assistant secretary, called in to state the situation, impressively announces that while th Department has notice of the "advisory" action of Congress and th President that "*The Government*" takes a different view of the question.

It is from that combination of conspiracy and diplomacy that th persistent effort has proceeded to indentify our long struggle for th right to a hearing before an honest tribunal as a part of Venezuela plan to avoid the payments of the corrupt awards. The mendacity o the attempt had to be acknowledged before the Foreign Affairs Com mittee, under oath, by Murray, the pseudo "secretary of legatio United States," but the utterly baseless insinuation has continued t play its part wherever the conspirators and their subservient diploma subordinates have thought it possible to give it a lodgment. If th treaty fails, we shall deprecate the reopening to further investigati of what has authoritatively been said to be "an episode in our dip matic relations to which every recurrence is an occasion for regre but the scope of such investigation would, necessarily, be wide a deeper and might throw some very desirable light on old and obsc diplomatic significance.

The joint resolution of March 3, 1883, was not the creature of th State Department, nor of Venezuela. It evidently did not exactly su either. It was the unanimous expression of Congress, after seven yea of searching investigation by its committees had cast a flood of light o the many tortuous ways of conspirators and diplomatists.

Its purposes and plan were so transparently just that it does n appear to have met with a very cordial reception anywhere outside the Congress and the President. But finally a treaty, drawn on l lines (it is said), has received the sanction of the Senate, the Preside and the Venezuelan Congress, and now, for these many months, re without President Blanco's signature.

Whether the time gained since 1883 has been sufficient to ripen new or develop a more extended conspiracy, whether the scheme the holders of the fraudulent "certificates" payable "to bearer"

ansfer them or cancel them on the payment of a certain per centum, ıd thus avoid the proposed new commission and an adjudication of the Aspinwall" and "Railway of the East" claims, which was proposed to ıd was entertained by the late Venezuelan minister, has been perected, we know not. Having declined to enter into the councils of ıe conspirators, and not being in the confidence of the Spanishmerican Bureau of the Department of State, we know nothing of the ›iled proceedings of either, except when Congressional investigation fts, at the same time, the veil of both.

Though, for the purpose of obtaining a settlement of our claims, we ıitiated, through a special counsel sent to Venezuela in 1861, the movent for a commission to adjudicate all claims against Venezuela, it ould seem that by declining to enter into the conspiracy to rob that overnment we now stand in imminent danger not only of her connued hostility, but of seeing our own Government insist that the laims of the conspirators who corrupted the commission shall be paid, 'hile we, who presented our claims, but declined the proposal of a corupt division, and were denied a hearing and adjudication, but "disıissed without prejudice," may be relegated to the good offices of the Diplomatic Bureau. After twenty years of struggle with the powers f darkness we wish to be spared that entombment.

We still hope that the convention of December 5, 1885, may yet be atified. Surely so just a measure, and one that has received the sanction of the Congresses of both nations, ought not to be defeated by the eference of Venezuela's Executive to the mere possibility of a future onflict with the existing arrangement in respect to the diplomatic debt. Jnless there is a settled determination to finally defeat the purpose of he joint resolution of 1883, the adjustment of that question ought not o be impossible to diplomacy.

But if by reason of an agreement made with the holders of the fraudlent certificates, or from any other cause, Venezuela or her Executive fficers, after all their protestations, now refuse to complete the ratifiation, we ask that our claim may be considered and held as admitted y Venezuela, and be included in any peremptory demand that may be ıade upon that Government for settlement, and that the moneys now in he Department of State heretofore paid by Venezuela may be held or the liquidation of our claims pro rata with any others for which 'enezuela may be held liable, as the joint resolution provided they hould be held.

As quite the entire body of our claims rests upon written acknowldgments by Venezuela of her indebtedness, there would certainly be o injustice or hardship in the demand. Venezuela's only pretext in espect to the "Aspinwall claim" is that, while the evidences of indebtdness held admittedly constitute a valid obligation against the Governıent. they should be considered a part of her *public* debt; and, as to er liability for the destruction of the value of the bonds of the "Railay of the East," that, notwithstanding the admission that the Governıent seized the road, released the subscribers to the stock (itself ıcluded) from liability for their unpaid subscriptions, and then sold he whole enterprise to an English party, taking payment in the disharge of a portion of the Venezuelan public debt, still the bondholders hould follow the rified "caja" of the company, and not the Government— ıe plunderer who appropriated the contents and extinguished the orporation.

We respectfully submit that the alternative should be presented to 'enezuela of making payment of our claims as demanded or referring ıem at once for adjudication under the treaty.

In any event, surely the failure to join a conspiracy to rob a foreig government, through the forms of corrupted international procedur ought not to be punished, not only by that government's contiou evasion of our just demands, but also by the refusal of our own Ge ernment to secure for us at least the same consideration that it m exact for those whose corrupt course has come quite near involving t national honor, and might well be held to have forfeited all claims the interposition of the Government in their behalf.

With respectful submission.

HENRY WOODRUFF,
Of Counsel for the "Aspinwall" and "Railway of the East" Claimant

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Mr. Rives to Mr. Woodruff.

DEPARTMENT OF STATE,
Washington, January 24, 188

SIR: I have received your letter of the 20th instant, inquiring a the cause of the suspension of the Venezuelan Claims Commis Convention.

I am constrained to say in reply that the Department is not no a position to make a definite announcement in respect to the new c vention which the joint resolution of Congress requested the Pr dent to negotiate.

An effort is now being made to arrange the difficulties that h arisen, and it is hoped that a successful result may yet be reached.

I am, sir, your obedient servant,

G. L. RIVES,
Assistant Secretar

Mr. Woodruff to Mr. Bayard.

NEW YORK CITY, *May 22, 188*

SIR: A copy of a letter purporting to have been addressed to on the 28th day of January last by Mr. W. P. Murray reached me this city after my return here on the 2d of February. During so weeks previous to that date I had been in Washington (at the hot have been accustomed to stop at for many years) and might easily h been communicated with by Mr. Murray, of whose presence ther was advised by one of his acquaintances the day after my arri His proposition might then have been made and met by me in y presence.

Anticipating at that time an early return to Washington, where my papers and documents relating to the Venezuelan Commission bu ness are, and not deeming the matter of the letter of much moment pressing importance, considering its authorship, and the evide already in the Department in respect to this bogus "secretary of le tion, United States," my response has been deferred. Then, too, I reason to infer from the tenor of a note from your Department, recei a few days before my departure, that the negotiations with Venez in respect to the exchange of the ratifications of the treaty were last about closed; and I am too weary in this matter to engage unnecessary correspondence.

As I find my return to Washington will necessarily be further post-
ned, and the Venezuelan case seems to be still pending, perhaps some
otice should be taken of the letter, to avoid the possibility of miscon-
ruction of my silence.

The charge to which Mr. Murray refers is simply a restatement in
y letter of November —, 1885, of the finding of the Committee on
oreign Affairs of the Fourty-fourth Congress. (Vide report by Judge
ringer.) I believe that letter contains a specific reference to the
oofs for every fact stated.

If the charge is "a false, malicious, and infamous libel," Mr. Murray
s rested very quietly under it for these many years. Why should he
w seek to affright me with visions of law suits? His quarry are
lges Springer and Rice, whose respective reports upon the evidence
ow not only Mr. Murray's connection with the petty De Hammer case,
trace certificates of the commission, payable "to bearer," amount-
to $324,733, into the hands of this bogus "secretary of legation,
ited States." The livery of a legation, especially that of Caracas,
s certainly not of heaven, yet it should not have been stolen and
n to allure victims and cover the "plunder." His own graphic word
dmitted to be perfectly descriptive of the result of his professional
l bogus official life in Venezuela.

As to the value of Mr. Murray's statements or his oath I would
er you to the findings of the committees in respect to his letter to
ior Ribas, chargé d'affaires of Venezuela, signed "Secretary of Lega-
n, United States." and the letter to Colonel Nobles, of Beals, Nobles
Garrison, the writing of which he denied under oath. The denial
s safe, for Colonel Nobles was dead.

I certainly shall not go out of my way either to seek or avoid a con-
versy of any kind with a man that I believe the record shows to be
adept at false pretenses and a perjurer.

The Narcissa De Hammer case, which he singles out alone for inves-
ation as to corrupt division, involved only $50,000. Possibly Mr.
rray did not divide the portion he received with "the United States
mmissioner." He may, in that case, have divided with the Vene-
lan commissioner, or the minister, or the umpire; or, possibly, he
y have kept the entire half. I am ready and willing to admit that
kept all he could from the widow, and cheated his coconspirators
of their share in the "plunder," if he found that possible. So there
be no controversy between us on the question.

But neither Mr. Murray nor the Widow De Hammer are very con-
cuous figures in the scandalous business. His letter has a tone
exaggerated importance that does not well become his subordinate
t in an infamous conspiracy that included a United States minister,
umpire, and international commissioners. Nothing that might be
ermined as to him or the De Hammer case would settle anything.

The reports of the Committee on Foreign Affairs, with the evidence,
on file, and many of the members are still in official life in Wash-
ton—Hon. William M. Springer, Hon. S. S. Cox, and others. They are
his matter most competent judges, better judges than a petit jury
uld be, of the conduct and character of Mr. Murray, of Minnesota.
indeed, he is, as he intimates, a reputable man in Minnesota, his is
ther case marking deeply the distinction between reputation and
racter.

efore closing, permit me to call your attention to one peculiar
ure of Mr. Murray's letter. He quotes, ipsissima verba, from my
er to the Department of State; apparently regretting that no copies

were distributed to the public. That being so, might it not be well t ascertain through what channel in your Department this brande bogus "Secretary of legation, United States," obtains information and access to the correspondence with the Secretary of State? Th discovery might throw much light on many of the past phases of th diplomatically dark Venezuela business. If it should bring into vie some of the unknown and hitherto undiscoverable "innocent holder of certificates payable to "bearer," about whom so much solicitude w exhibited in the correspondence of the Department immediately aft the passage of the joint resolution, I venture to assert that it wou cause no surprise in the breasts of the authors of the several mo recent reports of the Committee on Foreign Affairs, and certain would only serve to confirm my own belief, which has been fortified l most convincing evidence that has come to my knowledge since t investigation closed.

If parties now living, or the representatives of any now dead, reg these closing suggestions as an indirect assault, Congress may be mov to reopen the investigation, when we will be found prepared to ma the charges directly and openly before any committee having the pow to send for persons and papers. An interested public might then le why the will of Congress and the President, expressed with unan nity and clearness in the joint resolution of March 3, 1883, could l no expression by those who in 1883–84 *formulated* the corresponde with Venezuela, but submitted instead of the plan of that resolut one that would cover selected fraudulent certificates in certain unde nated hands, gravely described as "innocent," and therefore under peculiar protection of departmental assistants posing in the busi as "the Government."

Most respectfully, your obedient servant,

HENRY WOODRUFF,
Of Counsel for the "Aspinwall" and "Railway of the East" Claimant

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Mr. Woodruff to Mr. Bayard.

NEW YORK CITY, *July 9, 188*

SIR: Unless it be deemed "incompatible with the public interes would, in behalf of my clients, who, in fact, have an interest in matter, like to know whether the recent ratification by the Senat some treaty or amendment to a treaty with Venezuela closes the l drawn negotiation or only commends us to the languid pleasure of t Government for its concurrence.

Very respectfully, yours,

HENRY WOODRUFF,
Of counsel for the "Aspinwall" and "Railway of the East" claimant

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Mr. Rives to Mr. Woodruff.

DEPARTMENT OF STATE,
Washington, July 11, 188

SIR: In response to your inquiry of the 9th instant, in relatio the claims treaty lately concluded between the United States

Venezuela, I have to inform you that the Department has not been advised of what, if any, action the Congress of Venezuela has taken upon the convention.

I am, sir, your obedient servant,

G. L. RIVES,
Assistant Secretary.

Mr. Woodruff to Mr. Bayard.

NEW YORK CITY, *August 28, 1888.*

SIR: The passengers on board the steamer *Caracas* from Venezuela, at arrived here on the 14th instant, proclaimed the ratification of the w treaty with that Government, and that the treaty came on with steamer. The same information has come in newspaper dispatches m Washington, but as yet I have not noticed any proclamation of treaty by the Government.

f the treaty has become a public document I would be pleased to ive a copy of it.

Very respectfully, yours, HENRY WOODRUFF.

Mr. Bayard to Mr. Woodruff.

DEPARTMENT OF STATE,
Washington, September 6, 1888.

R: In reply to your letter of the 28th ultimo, I beg to say that the zuelan copy of the treaty ratified by the Government of Venezuela rrive in August, and I was notified on the 27th of that month of act by the newly appointed chargé d'affaires, Mr. Silva, but owing e expiration of the period fixed in the treaty for the exchange of cations it is not possible that such exchange should now be until further authority has been given by each Government to.

e treaty, therefore, can not be proclaimed in the absence of an ange of ratifications duly made in accordance with the terms of reaty itself.

I am, sir, your obedient servant,

T. F. BAYARD.

Mr. Woodruff to Mr. Bayard.

NEW YORK CITY, *September 17, 1888.*

R: Since the receipt of your favor of the 6th instant, in reference e failure of the exchange of the ratifications of the recent convenwith Venezuela, I have endeavored to ascertain some facts in ct to the ratification in Venezuela and the transmission of the y to this country. As to some of those facts your Department not be advised through the usual channels.

vices received in Washington and this city, in July last, were, before July 21 (the date of the sailing of the steamer *Philadelphia* La Guaira) the Bayard-Soteldo treaty had been sent to the Vene- n Congress by President Paul; that it had been approved by the

Senate, and "would be by the House of Representatives within five days."

A well-informed Venezuelan, a resident of Caracas, who was a passenger by the steamer *Caracas*, that sailed from La Guaira on the 7th of August and arrived here at midday on the 14th of August, stated that the steamer had been detained for a day, that the ratified treaty might be brought on. The steamer made the passage in the usual time. The ratified treaty was doubtless in Washington on the morning of the 15th of August last, the day when (as the public press has advised us) the ratifications were to be exchanged.

The Venezuelan Government certainly knew whether or not it had a representative in Washington competent to make the exchange; and could have had one there if it had so desired. (Telegraphic communication between Caracas and Washington was established early in July.) It is now stated that a most unfortunate error made by a clerk in the Venezuelan copy of the treaty would also have prevented the exchange of the ratifications on the 15th ultimo. It was scarcely to be expected that the treaty could survive two such unfortunate mistakes.

The subordinates of the Venezuelan Government are now, evidently taking their part in the plan of delay that has been so successfully practiced by subordinates since both Governments agreed upon the plan of settlement directed by our Government in the joint resolution of March 3, 1883.

Is it not possible, in some straightforward and speedy way, to thwart the malign influence that seems about to add another year, with its possible chapter of accidents, to the eighteen years already given to this infamous conspiracy that has included in its bonds officials of both Governments? Of course we are helpless in the hands of the Government. Is the Government itself helpless and to be longer trifled with? It must not.

I beg to be pardoned for offering a suggestion. If the Venezuelan Government, by its chargé d'affaires, presents the treaty that was, in fact, ratified and in Washington on the 15th August, might not the Executive (the Senate concurring) waive the limitation as to time of formal exchange? Then action upon the part of the executives of both Governments, in the appointment of the commissioners, might be taken as curing the failure of their agents to make the exchange of papers in fact completed and ready for exchange, at the time and place named in the treaty.

Very respectfully, your obedient servant,

HENRY WOODRUFF,
Of Counsel for the "Aspinwall" and "Railway of the East" Claimants

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Mr. Adee to Mr. Woodruff.

DEPARTMENT OF STATE,
Washington, September 19, 1888

SIR: I have received your letter of the 17th instant in regard to the Venezuelan claims treaty.

The subject to which the letters relates is receiving the consideration of the Department.

I am, sir, your obedient servant,

ALVEY A. ADEE,
Second Assistant Secretary

Mr. Woodruff to Mr. Rives.

NEW YORK CITY, *November 14, 1888.*

ɪrmit me to inquire whether those exercising the powers of uelan Government have succeeded (of course contrary to their) in making it impossible, apparently, to exchange the ratifi- the new treaty with that Government till after next March? 'enezuelan Congress meets the 1st of February ensuing, and, nderstood, always meets promptly when the *executive head* public desires that it shall so meet, would it be unreasonable t *good faith be not only expressed but exhibited* by that Gov- y its taking action to secure a prompt assembling of its Con- an immediate exchange of the ratifications of the long reaty? That could easily be done and the ratifications in Washington by the 15th of February ensuing.

y English gunboats that can secure reparation from Vene- in thirty days? The business of our Navy has been to h pomp, her exiled dead. The result of our diplomacy with ɪr, nothing.

ɪ respectfully, yours,

HENRY WOODRUFF.

Mr. Rives to Mr. Woodruff.

DEPARTMENT OF STATE,
Washington, November 15, 1888.

ıave to acknowledge the receipt of your letter of the 14th which you inquire in regard to the exchange of "the ratifi- he new treaty with" the Government of Venezuela.

I have to state that negotiations are still pending with the ı Government.

, sir, your obedient servant,

G. L. RIVES,
Assistant Secretary.

Mr. Woodruff to Mr. Blaine.

NEW YORK, *April 23, 1889.*

you are, presumably, informed of the status of our long- ntroversy with Venezuela, I need not reproduce here what ɔondence on the subject in the Department of State fully My letter of November, 1885, to the Department gives a the case up to the time just antecedent to the signing of for the appointment of a new commission. That treaty, rati- h Governments, was not "exchanged" last summer because the Venezuelan copy did not arrive in Washington within nited; besides, there was a mistranslation or ambiguity in it. lents had all the effect that design could have had in accom- ıay.

ɔmentary convention, extending the time for the exchange atory of the ambiguous provision, was promptly ratified by December 5, 1888. It has awaited the meeting of the Vene- gress for ratification by that Government. Considering the protestations of good faith upon the part of that Govern-

ment, it was supposed that its action would be prompt and conclusive. The advices from Caracas, by the steamer that arrived last Wednesday, give no confirmation to that hope. The Venezuelan Congress that should, under their constitution, have met on the 22d of February last, has certainly been in session since the 14th of March during two or three days of each week, but, while giving precedence to new public contracts and internal affairs, has left the treaty, together with dignity of "The United States of the North" waiting at the door.

Venezuela had a grievance that demanded redress. That has been accorded. Her duty of prompt acceptance of the new tribunal is clear. We respectfully suggest that Venezuela's discussion of the duty of this Government under the "Monroe doctrine" and her proposed arbitration with England may well be postponed until our differences with Venezuela have been finally adjusted.

In view of past experiences and the discovered attempts to form new combinations with the material of the old conspiracy (that seems to have had its ramifications even outside the commission and the legation), we have become suspicious of delays that appear to be the result of cooperative methods rather than of accidents or necessity. It may be considered a shrewd scheme to finally defeat the new treaty and then fall back on the old "certificates" that issued out of the corrupt conspiracy, their payment being then demanded upon the one side and not seriously resisted on the other because of the interest acquired or quenched by official negotiators. A scheme of this character was exposed some years since, its existence being proven by the correspondence. It is said to have been revived since, in a modified form, and unblushingly proposed to a former Secretary of State.

The merit of such a scheme, you will readily perceive, consists in the possibility of thus finally distributing a large portion of the "plunder" among those engaged in the original and the later conspiracies, and preventing any adjudication upon the claims of those who have declined to engage in the corrupt and corrupting conspiracies. Certainly neither the action nor the nonaction of the Department of State can be relied on to bring the long controversy to that discreditable end.

Telegraphic communication with Caracas has long been established. The Venezuelan minister can learn any day the purposes or action of his Government. Another postponement of action till the last days of the session of their Congress that would necessarily preclude any correction of error, and, if not final, postpone any possibility of peaceful action for another year, would doubtless be followed by many real or feigned regrets upon the part of those who have had immediate charge of the correspondence in this long-pending matter.

Very respectfully, yours,

HENRY WOODRUFF,
Of Counsel for the "Aspinwall" and "Railway of the East," Claimants.

Mr. Wharton to Mr. Woodruff.

DEPARTMENT OF STATE,
Washington, May 6, 1889.

SIR: I have to acknowledge the receipt of your letter of 23d ultimo, calling attention to the nonaction of the Venezuelan Congress on the supplementary convention signed at Washington the 5th October, 1888, between the United States and Venezuela, "to further extend the period fixed for the exchange of ratifications of the convention of

December 5, 1885, and to extend the period for the exchange of the ratifications of the convention of March 15, 1888."

I am, sir, your obedient servant,

WILLIAM F. WHARTON,
Assistant Secretary.

Mr. Woodruff to Mr. Blaine.

NEW YORK CITY, *June 26, 1889.*

SIR: The steamer from Venezuela that arrived in this port the last week in May brought the intelligence that the long-pending treaty with that Government and the supplements thereto had all been ratified by the Venezuelan Congress, and that the papers were on board, in the hands of a bearer of dispatches to the Venezuelan legation in Washington.

It was supposed that an exchange of the ratifications would take place quite immediately, and probably it did; but we have failed to see any announcement of the fact or any notice of a promulgation of the treaty. If the exchange of the ratifications has taken place it may be a matter of much interest to citizens whose rights are affected by the provisions of the treaty that they should know, at the earliest possible day, its exact text, that they may properly prepare their cases under it.

If any promulgation of the provisions of the treaty has been made in Washington we would be pleased to be informed through what channel, so that we may secure a copy.

As it is considered quite proper to suggest proper considerations to a court in respect to the appointment of a referee, it can not be out of place to say, in regard to the appointment of a commission under the new treaty, that surely no one that might be proposed by or in any manner in alliance with the members of the old conspiracy (whether they were in private life or official station) should find a place on the new commission. There are many men in the country whose recognized judicial ability and integrity would be at once acknowledged as meeting the requirements of the place. We only ask that such an one may be given the position.

Very respectfully, yours,

HENRY WOODRUFF,
Of Counsel for the "Aspinwall" and "Railway of the East" Claimants.

Mr. Woodruff to Mr. Wharton.

NEW YORK CITY, *July 24, 1889.*

SIR: In my mail of the 17th instant I received your favor bearing date the 11th instant, inclosing copies of the Venezuelan claims treaties, in response to my letter of the 26th June.

It appears by the printed document that the treaties were proclaimed on the 4th of June, certainly not "on the housetops" nor through the Associated Press, or those most deeply interested would have known their rights and duties and the time limitations under which they must act at an earlier day.

As no public announcement of the appointment of a commission on the part of our Government has yet been made, I trust it will not be considered obtrusive if I call your attention to the fact that nearly two-thirds of the time limited by Articles II and III of the treaty of 5th December, 1885, has passed, leaving but a brief time for the ten days'

consultation of the two commissioners and the possible necessity of a designation of the third commissioner by the minister of Russia or Switzerland. Those ministers can not be expected to act in a day.

No specific time within the three months being fixed for the meeting of the two commissioners first appointed, but all the commissioners provided for by Article II being required by Article III, as "the commissioners so appointed," to meet in the city of Washington "within three months from the exchange of the ratifications" of the treaty, it would seem like putting in peril the execution of the treaty to delay the appointments.

That the Government of Venezuela, the debtor, should embrace offered opportunities for delay might naturally be expected; but we ought (notwithstanding some rather saddening experiences in the past through subordinate officers in this matter) to be justified in hoping better things of our own Government.

If the Venezuelan Government has not yet made its appointment it might be well to call the attention of its minister to the narrowing limits of the time for action under Articles II and III of the treaty.

As there is telegraphic communication with Caracas, action may be expedited.

Very respectfully, yours,

HENRY WOODRUFF,
Of Counsel for the "Aspinwall" and "Railway of the East" Claimants.

Mr. Woodruff to Mr. Blaine.

NEW YORK CITY, *October 8, 1889.*

SIR: As under the treaty of December 5, 1885, for a reopening of the claims of citizens of the United States against the Government of Venezuela, the commission organized thereunder, "if required," shall "hear one person on behalf of each government on every separate claim," I, as attorney and counsel for Flanagan, Bradley, Clark & Co., and myself, whose claims have been duly filed with said commission, respectfully ask that the commission be required to hear me as the counsel therein upon the merits of said claims.

I have the honor to be, your obedient servant,

HENRY WOODRUFF.

Mr. Adee to Mr. Woodruff.

DEPARTMENT OF STATE,
Washington, October 18, 1889.

SIR: Your letter of the 8th instant, requesting permission to appear before the American and Venezuelan Claims Commission in the interest of certain claimants named by you, has been referred to that commission.

I am, sir, your obedient servant,

ALVEY A. ADEE,
Second Assistant Secretary.

Mr. Woodruff to Mr. Blaine.

EBBITT HOUSE,
Washington, September 1, 1890.

SIR: In the diplomatic correspondence accompanying the President's message of January 27, 1885, in Executive Document No. 52, Senate, second session Forty-eighth Congress, it is stated that Venezuela announced, through her minister of foreign relations, the "determination

of President Guzman Blanco to 'deposite' the monthly quotas assigned to the United States in Caracas instead of 'depositing them in Washington.'" (Vide p. 12 of Doc. 52, etc.)

It is not to be doubted that the Venezuelan Government made those "deposits" in Caracas to the credit of the fund for the payment of the awards that might be made by the new commission.

Venezuela made the last payment here to that fund in 1878. The payments were "deemed to have ceased from the 1st day of April, 1883." (Vide treaty 1885, Art. VII.) There must, therefore, be now on "deposit" in Caracas to the credit of the fund a sum equal to the interest on the whole amount of the old awards for some five years, about $312,000.

It is respectfully suggested that Venezuela should be required to pay over this amount, that it may be at once added to the fund now here, for pro rata distribution on the awards made by the new commission.

Very respectfully,

HENRY WOODRUFF,
Of Counsel for the "Aspinwall" and "Railway of the East" Claimants

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Mr. Woodruff to Mr. Blaine.

EBBITT HOUSE,
Washington, D. C., November 19, 1890.

SIR: By reference to the report of the secretary of the United States and Venezuela Claims Commission to the Hon. John Little, chairman of the commission that recently closed its sessions in this city, and the record of the proceedings of the commission, now on file in the Department of State, you will notice that two claims left undetermined by the commission were, in the brief language of the record, "Dismissed without prejudice to other prosecution of the claim." They were (1) the claim of the undersigned, in respect to certain bonds (Docket No. 25, old No. 47), and (2) the claim of Flanagan, Bradley, Clark & Co. (Docket No. 20, old No. 46).

The reasons given for this action of the commission will be found in the opinions of the commissioners in these cases. The presiding commissioner, Little, in closing his opinion in reference to the case of the undersigned upon the bonds, says:

> She (Venezuela) has all the valuable property imported for the road and the benefit of the labor and money expended thereon by the contractors, nothing ever having been paid for them save the bonds. Were there time I would enter the allowance, and leave to either party to move for a new hearing.
>
> I must, therefore, dissent from the conclusion of my colleagues to dismiss this case. As it, with No. 20, is to be dismissed, however, I quite agree this should be done without prejudice. The failure of Venezuela to produce the proofs called for, and which it was reasonably expected by the claimants she would be able to supply leaves the cases in a condition of submission, not, in my opinion, contemplated by the treaty.

This disposition of the cases having been made, the undersigned entered before the commission his formal protest against the withholding by the defendant Government of papers called for by the commission as early as November, 1889, the most important of which papers were of a nature that left no room for doubt but that they were in the possession of the Government of Venezuela. Of such are (No. 4 on the list of papers demanded) "the contract of the Government of Venezuela with Arthur Clarke for the binding of said line of railroad"

To avoid all doubt and future question I have thought it would be well to have the bill give specific authority to the Secretary of State to make the application and distribution of the moneys as I have above indicated. The draft amendment I have appended to the inclosed bill would, I think, effect that purpose, and would doubtless receive the sanction of the Congress if assured that it met the approval of the Department of State.

Very respectfully,

HENRY WOODRUFF,
Of Counsel, etc.

P. S.—Deducting, however, from the accretions of said funds before making such credit in favor of the Venezuelan Government, the amount of the loss suffered by the Government of the United States on account of interest and exchange in respect to the payments heretofore made on said awards, and, further, reserving such sum therefrom as the Secretary of State may deem sufficient to cover any further losses in interest and exchange as may occur in respect to future payments upon said awards, and, upon such application being made, any remaining balance shall be distributed as a part of said fund.

Mr. Uhl to Mr. Woodruff.

DEPARTMENT OF STATE,
Washington, May 25, 1894.

SIR: I have received your letter of the 16th instant, suggesting that if, by the bill pending in Congress, the "accretions" on the moneys paid by Venezuela in satisfaction of the awards of the mixed commission are to be credited to that Government, as a matter of equity the losses caused to the holders of the awards by the use of time drafts and by exchange should be debited to it.

Your suggestion has had careful consideration. It is found that the loss in interest through payments in time drafts has up to this time amounted to $7,433.64, while the loss by exchange has amounted to $4,118.13.

Since the question of the application of the "accretions" has been brought before Congress by the claimants, the Department does not feel it would be proper for it to make suggestions on the subject of deductions on account of losses in interest and exchange. The claimants themselves should do this.

As regards the question of exchange, the respective rights of the two Governments would seem to depend on the place where the money was payable. This place was not fixed by the treaty. If the analogies of municipal law be consulted, it is found that by the common law, prevailing in this country, the debtor must seek the creditor to make payment, but the general rule of the civil law, which, it is supposed, prevails in Venezuela, is the reverse of this.

In respect to the place of payment and the incidental question of loss by exchange, it is found that this Department several years ago committed itself to some extent to the view that the payments might be made in Caracas.

I am, sir, your obedient servant,

EDWIN F. UHL,
Acting Secretary.

List of claims presented after August 1, 1868, and, so far as appears, not settled by Venezuela nor disposed of by the commission of 1889–90.

Managing owners of schooner *Mark Gray*, for $1,537.50 damages by detention fifty days at Maracaibo.

William Quirk, injuries by authorities of Venezuela in April, 1871. Letter of Mr. Ashton, October 2, 1889. Adequate indemnity requested.

A. T. Stubbs, injuries to the cargo of the *Jennie A. Stubbs*, at Maracaibo, in 1878.

NOTE.—As to the claims brought before the commission of 1889–90, which were "dismissed without prejudice," etc., I append part of page 19 of the report of that commission.

In but one of these ten cases do I find that the claim has again been presented since the date when thus dismissed, and that is the Jarvis case.

Docket number of claim.		Original claimant.	Amount claimed.			Decision of the commission.	When decided.
New.	Old.		Principal.	Interest.	Total.		
		Old cases dismissed.					
20	46	Flanagan, Bradley, Clark & Co.	$175,800.00	$469,386.00	$645,186.00	Dismissed without prejudice to other prosecution of the claim.	Aug. 26, 1890
25	47	Henry Woodruff..	58,072.88	252,992.18	311,065.06	.....do.....	Do.
27	25	Amelia de Brissot.	35,000.00	33,250.00	68,250.00	Dismissed for want of jurisdiction.	Do.
30	24	Narcissa de Hammer.	50,000.00	47,500.00	97,500.00	.....do.....	Do.
34	13	Albino Abbiatti ..	54,300.00	.....	54,300.00	.....do.....	Apr. 2, 1890
49	42	W. P. Murray....	463,086.55	.....	463,086.55	Dismissed on motion of the claimant.	Mar. 31, 1890
		Total.....	836,259.43	803,128.18	1,639,387.61		
		New cases dismissed.					
51		Mary E. Spader and others, heirs and legatees under the will of Admiral Louis Brion.	140,684.55	485,361.69	626,046.24	Dismissed on motion of the claimant, for want of jurisdiction, without prejudice to the prosecution of the claim elsewhere.	Aug. 26, 1890
58		Gustave A. Breaux, assignee of Folger & Co.	611.14	366.68	977.82	Dismissed on motion of claimant, for want of jurisdiction.	Jan. 8, 1890
61		Nathaniel Jarvis .	55,000.00	159,154.62	214,154.62	Dismissed on motion of counsel for Venezuela, for want of jurisdiction, without prejudice to the prosecution of the claim elsewhere.	Aug. 12, 1890
63		Wm. B. Matchett.	25,000.00	.....	25,000.00	Dismissed without prejudice to the prosecution of the claim elsewhere.	Dec. 14, 1889
		Total.....	221,295.69	644,882.99	866,178.68		
		Total.....	1,057,555.12	1,448,011.17	2,505,566.29		

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55TH CONGRESS, 2d Session. | SENATE. | DOCUMENT No. 224.

RECEIVING CLERK IN GENERAL STOREHOUSES, NAVY-YARD, LEAGUE ISLAND, PENNSYLVANIA.

LETTER

FROM

THE SECRETARY OF THE TREASURY,

TRANSMITTING

COPY OF A COMMUNICATION FROM THE SECRETARY OF THE NAVY, SUBMITTING AN ESTIMATE OF APPROPRIATION FOR ONE RECEIVING CLERK IN GENERAL STOREHOUSES AT THE NAVY-YARD, LEAGUE ISLAND, PENNSYLVANIA.

APRIL 5, 1898.—Referred to the Committee on Appropriations and ordered to be printed.

TREASURY DEPARTMENT,
OFFICE OF THE SECRETARY,
Washington, D. C., April 4, 1898.

SIR: I have the honor to transmit herewith, for the consideration of Congress, copy of a communication from the Secretary of the Navy, of the 2d instant, submitting an estimate of appropriation for one receiving clerk in general storehouses at the navy-yard, League Island, Pennsylvania, for inclusion in the naval appropriation bill now pending.

Respectfully, yours,

L. J. GAGE, *Secretary.*

The PRESIDENT OF THE SENATE.

NAVY DEPARTMENT,
Washington, April 2, 1898.

SIR: I have the honor to submit herewith, for transmission to Congress, to be included in the naval appropriation bill, an estimate of an appropriation of $1,000, under the caption "Civil establishment, Bureau of Supplies and Accounts," subhead, "Navy-yard, League Island, Pennsylvania," for one receiving clerk in general storehouse. In connection with this estimate I also inclose a copy of a letter, dated the 19th ultimo, addressed by the general storekeeper at the League Island Navy-Yard to the commandant of that yard, setting forth the necessity of providing for this receiving clerk.

I have the honor to be, sir, very respectfully,

JOHN D. LONG, *Secretary.*

The SECRETARY OF THE TREASURY.

UNITED STATES NAVY-YARD,
League Island, Pa., March 19, 1898.

SIR: On the 27th January, 1897, I reported the importance of providing for a receiver in this department, on the general ground that, however limited in its operations, and although a mere skeleton of an organization may be maintained, a competent receiver is indispensable to the proper working of a general store in every open yard.

Upon the person occupying that position the head of the department must depend for accurate reports of stores received and shipped, for information required by other heads of departments, and by boards of surveys and inspection, and for conveying and enforcing orders regarding same. A man of more than ordinary ability is needed for that purpose.

The special laborer who at present acts, and for a long period has acted in that capacity, is not qualified for all the duties and responsibilities of the position.

As receivers are among the appointments provided for by acts of Congress, I beg to suggest that the attention of the Bureau of Supplies and Accounts be invited to the importance of procuring an appropriation for a receiver at this general store during the present session of Congress.

Very respectfully,

J. A. SMITH,
Pay Director, U. S. N., General Storekeeper.

The COMMANDANT,
United States Navy-Yard, League Island, Pa.

Estimates of appropriations required for the service of the fiscal year ending June 30, 1899, by the Bureau of Supplies and Accounts, Navy Department.

Civil establishment, Bureau of Supplies and Accounts:

Navy-yard, League Island, Pennsylvania: In general storehouse, 1 receiving clerk (submitted) $1,000.00

Amount appropriated for the current fiscal year ending June 30, 1898. 70,432.08

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CONGRESS, } SENATE. { DOCUMENT
d Session. } { No. 225.

DOCKING OF VESSELS OF THE NAVY.

STATEMENTS

BEFORE THE

MMITTEE ON NAVAL AFFAIRS,

UNITED STATES SENATE,

TUESDAY AND SATURDAY, MARCH 22 AND 26, 1898,

ON THE

IENDMENT RELATIVE TO THE DOCKING OF VESSELS OF THE NAVY, INTENDED TO BE PROPOSED BY SENATOR PLATT, OF NEW YORK, TO THE NAVAL APPROPRIATION BILL.

APRIL 6, 1898.—Presented by Mr. HALE and ordered to be printed.

WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1898.

DOCKING OF VESSELS OF THE NAVY.

TUESDAY, *March 22, 1898.*

The committee met at 10 o'clock a. m.

Present: Senators Hale (chairman), Perkins, Chandler, Platt of New York, Hanna, Tillman, Martin, Butler, and McEnery.

Also Hon. Theodore Roosevelt, Assistant Secretary of the Navy; Rear-Admiral E. O. Matthews, Assistant Naval Constructor R. B. Dashiell, Hon. Israel F. Fischer, Hon. J. C. S. Blackburn, Mr. Lyonel Clark, Mr. W. N. Dykman, Mr. B. A. Colonna, Mr. Wallace Downey, and Mr. T. Clyde.

The CHAIRMAN (Senator Hale.) This hearing has been requested by Senator Platt of New York, who introduced on the 18th of January last the following amendment intended to be proposed by him to the naval appropriation bill:

"The Secretary of the Navy is hereby authorized at his discretion to enter into a contract for the docking of vessels of the Navy for a period of twenty years; and the Government shall have the privilege of extension of this period: *Provided*, That such dock shall afford all the facilities needed: *And provided further*, That such docking service shall be rendered at a steel, floating dry dock of the design and pattern known as the Clark and Stanfield model, to be located in the harbor of New York: *And provided further*, That the total cost to the Government under such contract shall not exceed the sum of ninety thousand dollars per annum: *Provided*, That under the contract the Government must have the use of this dock for a period of one hundred days each year, and that the dock company shall furnish all labor and defray all expenses incurred in the docking of all Government vessels. In the case of war, or emergency, the Government must have the use of such a dock beyond the period of one hundred days per annum if it deem it necessary, the compensation for such additional time beyond the one hundred days per annum to be determined and fixed by agreement between the Navy Department and the contracting company; but in case of failure to agree, by a board of arbitration to consist of three men, one to be selected by the Secretary of the Navy, one by the contracting company, and the third man to be chosen by the two already provided for."

Senator Platt, is any one present who represents the scheme set forth in this amendment?

Senator PLATT of New York. Representative Fischer desires to be heard.

STATEMENT OF HON. ISRAEL F. FISCHER.

Representative FISCHER. Mr. Chairman, I simply want to say that I came here to make no argument, but to state that the gentlemen who desire to build this dock have their industries located entirely within

my district, and that my presentation of their scheme to Congress to the Navy Department was merely because they were constitu of mine, and furthermore, because I conceived the scheme, as I studied it out, to be a good one, and I think the Government w do itself justice if it were to enter into it. I appear here this mo only to say that I know the gentlemen who are interested in scheme; that they stand very well in our community; that the responsible people, and would live up to any contract that mig made between them and the Government.

I am here, however, more particularly for the purpose of statin an article appeared in a paper in my State the other day whic that I had some other motive. I want to say that I have acted s as a Representative, and would have done the same for Mr. Dy who also has an industry located in the district I represent. So the scheme itself is concerned, they have their own counsel an present the merits of their case. With that I have nothing to d

The CHAIRMAN. There has been a hearing on this matter befo House Committee on Naval Affairs?

Representative FISCHER. Yes, sir. I appeared there on bel Mr. Downey and his copartners or friends interested in the sche ought to add that I asked some questions of Mr. Bowles, nav structor, of the Brooklyn navy-yard, who was present at the ti called on him to answer some questions as to Dry Dock No. 3, simply asked him as to his opinion concerning floating dry docks Bowles went on to argue before the committee that floating dry were not a success, and that he disapproved of the Government o renting, or expending one dollar on floating dry docks. Since made that statement to the committee the committee have ap floating dry docks, and have provided that one shall be built and tained at Algiers, which is really a portion of New Orleans, but opposite side of the river. Mr. Chairman, I simply came here to for Mr. Downey and his confreres.

Senator CHANDLER. Mr. Chairman, I will state that I ask Colonna, who was on the Coast Survey for many years and no marine railway in Norfolk, to come here, and I did so by your di after I had submitted his letter stating that he was willing t He comes, I understand, as a disinterested observer of the s and is very much in favor of floating docks. If Mr. Colonna w until after others are heard, I should like to have an opportunit to him to say something to the committee.

STATEMENT OF HON. J. C. S. BLACKBURN.

The CHAIRMAN. Mr. Blackburn, you appear here, I understa Mr. Downey?

Mr. BLACKBURN. Yes, sir.

The CHAIRMAN. Let me say before you begin that there are parties who desire to be heard this morning, and I do not see th will be any other opportunity afforded. So I suggest that as we good many documents and papers on the subject, and have mor information upon it, all parties make their statements as br possible.

Mr. BLACKBURN. Mr. Chairman, if you will allow me I will illustrate my appreciation of the situation by taking the fewest of minutes possible. For a good many years I used to sit w

here and listen to arguments, and I know how tedious it becomes. I will not undertake to make any argument. I r the first time in my life before a committee of either House ss as counsel, retained in support of an amendment offered ıator from New York, and I will state the case in a very few

ıIRMAN. My suggestion was made with a view of having you ıpon these gentlemen when they made their statements, rather yourself.

.CKBURN. Thank you, sir.

ɜndment of Senator Platt's can be very easily understood. It ɔ authorize the Navy Department to make a contract with a ıf responsible people, who are to furnish all facilities for the ' the ships of the Navy, giving a hundred days' service out ar, for a payment of not more than $90,000. It does not fix nsation at all.

ıIRMAN. That is the maximum?

.CKBURN. That is the maximum. It may be any part of that

invite the attention of the committee to the fact that the Gov- ıkes no risk. The Government does not pay a dollar unless service, and after a satisfactory fashion. Then the payment vernment is to be determined in the discretion of the Depart-

irman, I want to say that I know there is opposition to this t of the Senator's. I understand that that opposition is to nted here this morning. I will not undertake to say that ything personal or of a pecuniary character involved in that , but I will say, and upon the statement I will challenge ion, that whether measured by population or by tonnage New York has less docking facilities than any other city on the ıy. I know your dock No. 3 there. I am afraid it is a failure. ıde to fear, if not to believe, that it is built upon a basis that —a quicksand basis. I know the trouble that your engineer ; it right now and the court of inquiry that is ordered.

not dock the *Oregon* or the *Indiana* or the *Iowa* in a single you have got in New York Harbor. But a little while ago ne of your great battle ships to an English dock and docked I have a right to assume that it was because you could not re at home.

TILLMAN. It could have been docked at Port Royal.

ıCKBURN. If that dock could have been approached. I ıre told that Mr. Huntington is going to build a great dock at Newport News, but the Government has no guaranty for ɔody stands sponsor for that promise. There is not a bond ınd there is no guaranty for it. It looks to me like an affi- , continuance.

ɔd more docking facilities. I am not going to allude to the ɔf the country just at this time that promises war. There are ɜ who do not believe that there is going to be any war. I do e it. But suppose there was. You can not fight your ships ı contemplate having your ships crippled and wounded. You ırgeons on your ships to take care of the crippled seamen, but ɔ me that you are making no provision to take care of crippled ch is a great deal more important.

is would be an auxiliary. These people propose one thing,

and that is to expend, in round numbers, a million and a quarter of money, and to ask no return except for service rendered, which service the Government through its Navy Department shall first say is satisfactory. It fixes a limit.

If there be objection because this amendment of Senator Platt's proposes a certain description of dock, it seems to me that the only answer is, let those who have any other sort of a dock which they think is a good one come up and prove their faith by their works and offer to build one and leave it to the discretion of the Department of the Navy to make terms and bind the Government by contract.

Senator TILLMAN. Mr. Chairman, as I got in a little late I should like to know what proposition is pending that the Senator is discussing.

Mr. BLACKBURN. If the Senator from South Carolina will permit me, I will state that this is a proposition to authorize the Secretary of the Navy to make a contract.

The CHAIRMAN. I hand you the amendment offered by Senator Platt, which will best answer the question.

Mr. BLACKBURN. I know very well that there are docking interests in the city of New York that would be affected by the enactment of this amendment. They do not want it, and they are not to be blamed for their opposition. It is perfectly proper that they should oppose it. But I insist that this is a fair proposition, because it nowhere goes beyond the discretion of the Navy Department. That Department will fix by contract the compensation. These gentlemen will spend a million and more of money in their effort to supply the Government with the docking facilities that it needs for its Navy.

This dock will have 500 feet, with a probable extension to 600 and odd feet. The biggest battle ship you have got, I think, is 378 feet. In other words, in the event of war we will not have to ask the enemy to let us dock our ships on their docks.

You know the rule is that twice a year you have to overhaul these ships. Their condition depends upon the waters, whether north or south, to which they are assigned. We have not those dockings facilities now. New York is the second city in the world in point of population. I am not willing to admit that she is even the second city in point of power or importance.

If there be objection made from any quarter to this proposition, I answer and say that there is before you right now a naval representative of your Government who was commissioned to report, and who reported in favor of this very species of dock.

I wish to say further that there are two men here, one an Englishman, who is an expert, and the other Mr. Downey, who represents the company that proposes to do this work. They are the parties and only one other party that I wanted this committee to hear from, and that other is the honorable Assistant Secretary of the Navy, Mr. Roosevelt, who is here.

If this is not the best dock, the Department will not adopt it. If it is the best dock, the Department will make no contract in which the Government is not absolutely protected. In other words, Senator Platt's amendment as proposed here simply asks to confer upon that Department the authority and power to make a contract on their own terms, if it can be done, to provide for the necessities of the Navy, against which you have no provision now.

It is useless for any opposite interest to come here and protest upon the ground that this is giving special privileges to some one description of dock or company. It is open to everybody. These gentlemen have

no objection to the Department of the Navy being authorized to contract with anybody for any sort of a dock, provided you will do what this amendment proposes to do—leave it in the discretion of the Navy Department to protect the best interests of the Government and make the best contract that they can.

I will only ask, Mr. Chairman, that if the committee desires any technical information, which of course I have not, Mr. Clark or Mr. Downey may be furnished an opportunity to answer any questions that the committee may want to submit.

The CHAIRMAN. I suppose, Mr. Blackburn, the strength of this scheme, if it has strength, is that by it the Government, without investing any money except for rent, will speedily get a good and available dock?

Mr. BLACKBURN. I may answer, please, within eight months.

The CHAIRMAN. I was going to ask within what time?

Mr. BLACKBURN. Within eight months.

Senator PERKINS. I should like to ask the General a question. He has had some 16 years' experience on the Naval Committee and is thoroughly conversant with naval affairs. As to the policy of the Government leasing docks from private parties instead of owning them themselves, would not the result be that when our Government wanted the dock some trans-Atlantic liner would have possession of it?

Mr. BLACKBURN. Mr. Chairman, please let me answer there. The policy that I am advocating is the policy that the English Government has followed. Further let me add what had escaped my mind. I may be altogether in error, but I believe your Dock No. 3 at Brooklyn has cost well-nigh two millions of money. To-day it is a failure, and we all know it. I believe that the floating steel dry dock has to be approved and applied by all maritime nations. I believe that the floating dry dock is as far in advance of the sunken permanent dock as a steel-clad cruiser is in advance of a wooden sloop. You have to-day presented to you this very question, and you must settle it. The Government by this amendment of Senator Platt's is not asked to invest one penny. These gentlemen put up the money.

Senator TILLMAN. Are they richer than the Government, allow me to interrupt you by asking?

Mr. BLACKBURN. No, and they are not doing it for patriotism either. They are doing it for money. They simply ask that the Government will authorize its Department of the Navy to pay them what that Department thinks is a reasonable compensation for such service as it renders, provided it be absolutely satisfactory, in the docking of all the ships that you have got on your Naval Register. That is the whole proposition here.

Senator TILLMAN. Mr. Chairman, may I ask the Senator some questions?

The CHAIRMAN. Certainly.

Senator TILLMAN. I notice here, Senator, that the proposed rental for 100 days is $90,000?

Mr. BLACKBURN. Not to exceed $90,000.

Senator TILLMAN. Well, but it is for 100 days. That is the maximum?

Mr. BLACKBURN. They are to have a hundred days, and——

Senator TILLMAN. The Government is to have a hundred days, at $90,000?

Mr. BLACKBURN. No; I beg pardon. The Government is to have 100 days at a rate not to exceed $90,000, and in case of emergency, of war, then the Government is to have as much more time as it pleases.

Senator TILLMAN. For as much more money as these people will make it pay?

Mr. BLACKBURN. No; as much as may be determined by an arbitration board of three men, the Navy Department to select one.

Senator TILLMAN. Let us get back to the proposition. Ninety thousand dollars is 9 per cent on a million dollars?

Mr. BLACKBURN. Yes.

Senator TILLMAN. That is for one hundred days?

Mr. BLACKBURN. Ninety thousand dollars is not the amount fixed, Mr. Senator.

Senator PERKINS. What is the rate according to displacement per ton?

Senator TILLMAN. Ninety thousand dollars is the rate fixed in the amendment?

Mr. BLACKBURN. No; it says not to exceed $90,000.

Senator TILLMAN. And I say $90,000 is 9 per cent on a million.

Senator PERKINS. What is the rate per ton displacement?

Mr. BLACKBURN. I wish only to add, gentlemen, that this dock will handle any ship up to 12,500 tons displacement, which leaves a liberal margin over the biggest you have got.

Representative FISCHER. It will handle one of 15,000 tons, Mr. Downey says.

Mr. BLACKBURN. Yes, 15,000 tons. Now, take a ship like the Oregon. Her average draft, I believe, is about 27 feet. Let her be wounded, let her be crippled, how are you going to dock her in a 30-foot sunken permanent dock? You can not do it.

Senator TILLMAN. Right there I want to ask you——

Mr. BLACKBURN. You have not got a dock that can handle it.

Senator TILLMAN. Is it impossible for the Government to get the advantage of the building of a dock of this kind, so superior to all others?

Mr. BLACKBURN. No.

Senator TILLMAN. I understand you to advocate the rental of the dock rather than to have the Government own it?

Mr. BLACKBURN. Yes; because I think it is better for the Government.

Senator TILLMAN. Why not rent ships, then, if you are going to rent facilities for docking and repairing them?

Mr. BLACKBURN. You are trying to do that now.

Senator TILLMAN. We are trying to buy ships now, not to rent them. We would rent the whole of the British navy if we could, but we can not do it; and we are obliged to buy vessels.

Mr. BLACKBURN. I think we have a lot of auxiliary cruisers that we are renting right now.

Senator TILLMAN. We will own them if we ever take them at all.

Mr. BLACKBURN. No, you will not. On the contrary you will have them under your contract, which is to armor them and fight them.

Senator TILLMAN. And if they are lost to pay for them?

Mr. BLACKBURN. They belong to their owners.

The CHAIRMAN. Whom do you desire to be heard first?

Mr. BLACKBURN. I would infinitely prefer that the Assistant Secretary of the Navy, Mr. Roosevelt, should tell us what he thinks about this proposition. Then I should like to have Mr. Dashiell, Mr. Clark, and Mr. Downey answer any questions that members of the committee may wish to ask.

STATEMENT OF HON. THEODORE ROOSEVELT, ASSISTANT SECRETARY OF THE NAVY.

The CHAIRMAN. Mr. Secretary, is there anything that you desire to say on this matter? If so, we shall be glad to hear you.

Assistant Secretary ROOSEVELT. I will say this, that until now I had no idea why I was sent for. This is the first intimation I have had of it. Of course I can not here speak for the Secretary. He has not authorized me to speak for him.

I will very gladly say that I have advocated to the Secretary that he should favor this proposition, expressly reserving, Senator, whether or not he should favor it at the cost of ninety thousand dollars. That strikes me as an excessive price.

Mr. BLACKBURN. Let the price go out.

Assistant Secretary ROOSEVELT. But that we will have to pay a good price I have no question. If we do not pay a good price, we shall not get good work. Whether it is a dry dock or an armor plant or anything else that the Navy needs, we shall always find that the man who is capable of running a big plant is the kind of a man for whose business capacity, in private or in public life, a good price is paid. To get good work you have got to pay a good price. If you won't pay a good price, in the long run you get poor work. If these people can put up a good dry dock, it will be because they are business men of such capacity that they are entitled to charge a good price. I have favored this dock for this reason. We have not yet come to any settled policy of dock building in the Government. I myself very firmly believe that what you might call the backbone, the bulk of our docks should be made of stone and concrete. The House, for instance, does not believe that at all, preferring wooden docks, and many experts—the construction department, for instance, of my own Department—utterly disagree with me.

I feel as regards a wooden dock that it is really just as temporary an investment as it would be to hire for twenty years a steel dock. I believe that the chances of accident to a wooden dock, the wearing out of the dock, the necessity of repairs would make it in the end quite as expensive an investment as it would be to hire this steel dock for any reasonable sum.

Senator TILLMAN. Right there, Mr. Secretary, if it will not interrupt you——

Assistant Secretary ROOSEVELT. Not a bit, sir.

Senator TILLMAN. We have got to dock these steel vessels to keep them from rusting, or to keep the barnacles which fasten on them from cutting through. Why should a steel dock be more durable than a steel vessel? How are you going to protect it from the eating out of the salt water?

Assistant Secretary ROOSEVELT. There are two answers to that, sir. In the first place we do not have to buy this dock; we shall not have paid a cent for it. That is one of the reasons why I am advocating it. I admit that it is rather an experiment, and I am willing somebody besides the Government should try it.

While I feel inclined to favor one or more steel docks, I nevertheless recognize the fact that there are serious arguments against leasing one. I should plead very earnestly that we build or purchase a steel dock and have it put at Algiers. I believe it is the best type of a dock for

the Gulf, where we must have a dry dock. But I feel that I shou like also, at the same time, as it is all more or less experimental, to t the two systems—to try renting one dock as well as owning another.

The second answer to your question is that the dock is built in s tions so that you can take out one section and clean it at any time. am not acquainted with the technical terms of those sections.

Mr. DASHIELL. Self-docking.

Assistant Secretary ROOSEVELT. You can take out any one sect and clean it without difficulty.

I feel that we ought to have in New York more than one dock, a I feel that at least one of those docks should be either of very gr size, if of stone or wood, or else a floating dock, so that if one of ships comes in crippled and drawing 6 feet more than its normal di there will be no question of being able to dock it.

Of course, if the Navy Department is to make such a contract, it exact a penalty bond, so that the dock shall be in no danger of lapsing with a battle ship. But they do use these docks for big ships than any battle ship we have in the United States Navy. I h no question that under proper conditions of building and under pro conditions of contract the dock can be made absolutely safe, and t though we shall have to pay a good rental—a rental that will pa good profit to the men willing to do good work to the Government— that as an offset we will be saved the necessity of making repairs, will be saved the necessity of exercising supervision over the dock, saved the risk of the loss of the dock. I think it will be worth Government's while to try the experiment as regards one dock.

I quite agree with you, sir, that normally we should own our docks, but in this instance it seems to me it would be worth while make an experiment, to see whether the system that has done wel England would not do well here.

It is a matter that is aside, but permit me to say something ab the use of Port Royal.

Senator TILLMAN. Do you know why we had to send to Halifa get a vessel fixed when we had the dock at Port Royal?

Assistant Secretary ROOSEVELT. I will be delighted to tell y The Port Royal dock had been reported as unavailable for the N until a good deal of work was done in dredging; and it is not poss at Port Royal to enter a ship at all times. It is possible only to e the Port Royal dock at very exceptionable tides. Even then, whe big battle ship comes up near the dock, as it comes along where it got to be anchored, there is but a foot of water between the botton the ship and the bottom of the harbor.

Senator TILLMAN. It is the silt across the bar.

Assistant Secretary ROOSEVELT. There are places where there is a foot between the bottom of the channel and the bottom of the s When you put an anchor out, unless the anchor is well submerged, i the most dangerous kind of a sunken rock. You know how the big hoo the anchor projects up. To touch the top of that projection (and i course projects more than a foot) would mean very serious damage, possibly the loss of the vessel.

There are also no facilities for properly turning into the dock. On the best captains of our Navy, a man whose name all of you would kn told me that he would rather take the *Indiana* into battle than t her into the Port Royal dock as she was now. I very earnestly h that it will be put in order so that we can use it, as we unquestion

ı when the channel is deepened and when the proper alterations are ıde.

The CHAIRMAN. You did not dare to risk it?

Assistant Secretary ROOSEVELT. As it was we did not dare to risk it.

Mr. BLACKBURN. And you sent her to Halifax?

Assistant Secretary ROOSEVELT. Yes; we had no alternative.

Senator PERKINS. The dry dock at Halifax is a basin dock, is it not?

Assistant Secretary ROOSEVELT. Yes.

The CHAIRMAN. Let me ask you one or two questions, not to take ıch time. Are you from your investigation convinced that under ıs scheme we will get at a nearer point of time than in any other way ;ood, useful, available dock?

Assistant Secretary ROOSEVELT. Yes; unless we ourselves purchase ɜ dock outright from abroad.

The CHAIRMAN. But more speedily than by constructing any other ıd of a dock?

Assistant Secretary ROOSEVELT. Yes, sir.

The CHAIRMAN. That being so, and possessing that merit, in your ıw, what reason is there why this company, which, as I understand ı believe, and perhaps have said, is a company well established and large moneyed resources, should not go on and build the dock and ve it ready for the Government in eight months and take its chance ɜn of the Government needing it and paying it a fair rental?

Assistant Secretary ROOSEVELT. Now I have to explore the hidden main of motive, sir, and I have got to make a guess at it. I suppose ɜan answer that perhaps best in this way——

The CHAIRMAN. Perhaps you can not answer it as well as the gentle- ɜn who represent the company, but I take it the very question I have ked may have occurred to you.

Mr. BLACKBURN. Will the secretary and the chairman allow me to swer it?

Assistant Secretary ROOSEVELT. I can answer to this extent, sir. ıe question came up last year whether we could not get the Newport ɔws Company to build a dock suitable for war vessels as a speculation, d the Newport News people at that time told me that they were very luctant to do it, for they did not know when it was done whether the ɔvernment would put the ships in or not; that they could not tell ıat the policy of the Navy Department in the future might be, or en what the policy of the Navy Department at present might be, and at it would be adding a very great element of risk and uncertainty their business.

Let me reiterate, gentlemen, that I am speaking for myself, without thority from Secretary Long to represent him. I had no conception ıen I came up here what I was asked to come up for.

Mr. BLACKBURN. I asked that you might come.

Assistant Secretary ROOSEVELT. Indeed! As I told Senator Chand- ; it was not until you began to speak that I had the slightest idea ıat I had come here for. So I have come, and I give you the best ıults of a good deal of careful thought, for I suppose that those who at ıst have some, even the slightest responsibility for the Navy Depart- ɜnt and for our naval affairs, have thought very seriously over the y docks. I am not an expert. I know perfectly well that there are ;uments advanced against stone, wooden, and steel dry docks; against ɔ leasing of a dock, and against the Government ownership of a ɜk. After considering all those arguments, pro and con, my own

feeling was that normally we ought to build stone docks; that t might be one or two places where it was perfectly safe and economical to build wooden docks; that we also ought to try the ex ment of steel docks; that at least one such steel dock should be chased by the Government (the dock that should go down to Alg and also I have thought that it would be a good thing for the Go ment to try the experiment of leasing, on proper terms from resp ble people, one such dock as this is.

As for the responsibility of the company, I, of course, have ma such investigation as I take it for granted would be made befor Department would enter into a contract. But from the inform furnished me from New York, and from the character of its spo here, I have felt that it was probably a trustworthy company; a think we have this very big safeguard in the matter, that they got to go to the expense of the outlay of the capital, and we pay the interest on it if the scheme succeeds. If they are not a good pany and their dock bursts, they lose the capital and we simpl one year's payment of interest. So we have a good guarantee.

Senator TILLMAN. Twenty years' interest.

Mr. BLACKBURN. It is not paid in advance. It is terminable a minute in the discretion of the Department.

The CHAIRMAN. It is to be a payment for service rendered, I u stand.

Mr. BLACKBURN. Altogether. Not a penny is to be paid unt service has been rendered, and satisfactorily rendered.

Assistant Secretary ROOSEVELT. If the dock smashed at the e one year, of course we would not continue to pay for 19 more The minute they could not give us 100 days' service a year they have violated the terms of their contract, and of course we should pay no money at all.

Mr. BLACKBURN. That is it. Now, Mr. Secretary, if it will not i rupt you, let me ask permission from the chairman to state th knows better than anybody else that what the Government did i matter of the armoring of our ships, both as to the Bethlehem Works and the Carnegie Company, is precisely what is here prop

Senator TILLMAN. Precisely, and that is what we are objectin at least it is what I am objecting to.

Mr. BLACKBURN. We did in those cases precisely what is her posed. Let somebody take the risk. The Government pays for it gets and no more. You paid for the Carnegie plant. Then the ernment paid for the Bethlehem steel plant.

Senator TILLMAN. And gave it to them.

Mr. BLACKBURN. You could not have expected to have done They said: "We can not afford to take this risk; the Government do it." The Government did do it, and the Secretary of the Na my judgment, did exactly right.

The CHAIRMAN. Do any other members of the committee wish t Assistant Secretary Roosevelt any questions?

Senator TILLMAN. I should like to ask him why he thinks that vate corporation can build a dock quicker and better than the Go ment. Is not that a reflection on your office and your entire B of Construction and your methods of work?

Assistant Secretary ROOSEVELT. It would be if I had ever said I never said it.

Senator TILLMAN. You practically said it.

Assistant Secretary ROOSEVELT. No; I did not.

Senator TILLMAN. I beg pardon if I misunderstood you. My inter-
station of your language was that you will get a dock quicker and
tter——

Senator CHANDLER. Let the Assistant Secretary explain.

Senator TILLMAN. I should like to have him explain.

Assistant Secretary ROOSEVELT. Very good, sir. I answered Sena-
flale's question, which was whether we could not get a steel dry
ck quicker than we could get any other kind, and I said I thought
could. I compared the rapidity of building different kinds of docks—
t the relative speed of Government and private builders. I believe
can get a steel dry dock by outright purchase quicker than in any
ier way. For instance, Secretary Long asked me to bring down Mr.
rk, because there is a chance now of getting a big steel dry dock
it is within six weeks of completion in England. That would prob-
y mean that in three months we could establish that steel dry dock
n at New Orleans. In the event of trouble—in the event of war
ing within a reasonable period—it would be invaluable to us to have
h a dry dock.

have very little question that we could build a steel dry dock just
quickly as an outside firm could build it, with this difference, sir.
re are outside firms who have made a special business of building
l dry docks. There is nobody in the Navy who has made a special
iness of it, and we should have to accept some preliminary delay
n organizing our work, in entering into contracts, and in providing
proper supervision of the contracts. But with that rather trivial
viso, I think the time would be substantially alike.

enator TILLMAN. Right there, Mr. Secretary, have we or have we
bought the two Brazilian war vessels? I saw it so stated in the
ers, and that one of them is on the way here now.

ssistant-Secretary ROOSEVELT. Without being able to answer by
book, I understand that we have bought them, sir.

enator TILLMAN. Do you see any objection to buying a dry dock,
e need one, any more than buying a ship when we need it?

ssistant Secretary ROOSEVELT. Of course, I do not, sir. I would
ocate the purchase of a dry dock, as we need it, if we can come to
greement as to terms. If there is an emergency that would justify
purchase, I most emphatically think we ought to purchase, if we can
t under proper provisions.

r. BLACKBURN. Would it embarrass you to let me ask you a prac-
l question just there?

ssistant Secretary ROOSEVELT. I am not easily embarrassed, sir.

r. BLACKBURN. I am sure of that, but I did not know that the
mittee knew you as pleasantly or as well as I. When you sent the
iana to Halifax, did it not cost $4,000 to dock that ship, in addition
hich you furnished a very large proportion of the labor?

ssistant Secretary ROOSEVELT. Yes, sir; substantially so.

r. BLACKBURN. Do you remember how many days she was in
kage?

ssistant Secretary ROOSEVELT. I do not. She was a number of
s in dockage. She was taken out to be sent up to Halifax and
brought back again.

enator PERKINS. May I ask you, if you please, the capacity of the
k you have in view, its estimated cost, and its comparison as to size
that recently purchased by the Spanish Government and sent to
a?

ssistant Secretary ROOSEVELT. The Clark & Stanfield dock we
in view has a capacity of about 15,000 tons.

Mr. CLARK. I shall be happy to state the details.

Senator TILLMAN. Do I understand you to say that this dock, is nearing completion, would cost about half a million dollars?

Assistant Secretary ROOSEVELT. I think it will cost more than sir. I think that probably is about the expense of the building of a dock, but I am only giving you a guess on my part. I was ask a guess. I can only give you a guess; but I feel sure we could n this particular dock for half a million. We should have to give n a million to get it.

STATEMENT OF LYONEL CLARK, CIVIL ENGINEER, ASSOC INSTITUTION OF NAVAL ARCHITECTS.

The CHAIRMAN. State what relation you have to this scheme?

Mr. CLARK. We are specialists in the construction and desi floating docks.

The CHAIRMAN. You say "we." What is your company?

Mr. CLARK. The firm of Clark & Stanfield. I am the man partner.

The CHAIRMAN. You represent the particular kind of dock co by the amendment under consideration?

Mr. CLARK. That is our patent.

The CHAIRMAN. You represent that concern?

Mr. CLARK. I am a partner in the firm of Clark & Stanfield.

The CHAIRMAN. Go on and state briefly what the scheme is and you have to say with reference to it.

Mr. CLARK. The dock that Mr. Roosevelt mentions is a dock th have designed and which is now being built in England.

Mr. BLACKBURN. Let me interrupt the gentleman a moment to that I do not think he means to be understood as saying that he sents the company which is here with this amendment, but he repre the patent that this company is proposing to use.

The CHAIRMAN. So I understand; the dock that is mentioned i

m our designs. This dock is being built for the Vulcan Company, of ettin, in Germany, who required it to enable them to take up a North rman Lloyd contract for lengthening their vessels.

The length of this dock is 510 feet. Its clear width of entrance is 82 t, and as at present designed the draft of water over its sill is only feet. But, of course, in these docks it is the simplest matter in the rld to increase the draft to anything one wishes.

This dock is specially designed to lift the ocean steamers of the rth German Lloyd and the Hamburg-American Lines, and also government cruisers; but in conjunction with the existing pontoons at ttin, it would be able to deal with the *Kaiser Wilhelm der Grosse* of 000 tons displacement.

The lifting power of this dock, when dealing with vessels over 510.0″ g, and which therefore project beyond the dock, is 11,000, but with rt and heavy vessels by using the gates its power can be increased to 12,000 tons, without making any allowance for that portion of ship still in the water. It is therefore probable that in the case of ort and heavy ironclad this dock could lift it even if it weighed 00 tons, not 15,000 as Mr. Roosevelt stated.

he first plate of this dock was laid on the 1st of November, and it ld be completed if required in about four weeks from now. The tractors have been working rather slowly of late because the con- t time for delivery is not until June.

t occurred to me before leaving London that this dock might come seful for the American Navy if it could be obtained. I consulted r attaché in London and he thought it a good idea, and before I left land I put the matter in train to see whether it would not be pos- e to obtain this dock from the Stettin Company. Mr. Hunter, who he representative of Messrs. C. S. Swan & Hunter, the builders, with whom of course the contract is made, is in America now, and will soon, I hope, be in a position to say whether the dock can be ained or no.

he CHAIRMAN. You have given the dimensions of the dock and lepth. Would that dock be of any use to us with our large battle s?

r. CLARK. Yes, you have nothing larger in your battle ships than ould lift. You could take a vessel which did not exceed 405 feet in gth and of 82 feet in beam, and any draft you choose. To increase draft is a mere matter of adding a row of plates to the walls, and s not affect the design of the dock.

he CHAIRMAN. You could adapt this dock, then, very readily to sels of any draft?

r. CLARK. Yes; as long as the dock is suitable as regards length beam, as the question of depth in a floating dock is not like that graving dock.

he CHAIRMAN. It is easily altered?

r. CLARK. Yes; it is. You simply have to build up an extra row plates on the walls and this dock can be made to take 27 feet or e.

enator PERKINS. If I do not interrupt you, I should like to ask a stion for my own information. In raising the side of the dock, is not center of gravity so high that the battle ship endangers the capsiz- of the pontoons?

r. CLARK. But we can do whatever we like. A dock is like a . You can build a ship so that it can not capsize, and we can build ck so that it can not capsize.

Senator PERKINS. A ship has, however, water bearings very differe from a dock.

Mr. CLARK. Whether a ship or a dock, it makes no difference; the are both floating structures and subject to the same laws.

Senator CHANDLER. Of course you must increase the width as you increase the capacity of the dock.

Mr. CLARK. It all depends upon the original stability of the dock. This is somewhat a complex problem to explain to a committee like this, but it is one which is perfectly understood by the naval architects.

Senator CHANDLER. You can maintain stability by widening the dock?

Mr. CLARK. You can increase it by widening the dock. The dock itself with the ship, or the whole mass, represents something like 20,000 to 30,000 tons, and the addition of a strata of plates weighing perhaps 20 tons, even when placed on the top of the walls, has no effect on so large a mass.

The CHAIRMAN. Will you state to the committee in what cases great battle ships of more than 12,000 tons have been docked without trouble, and in absolute safety in this kind of a steel dock?

Mr. CLARK. The only floating dock I know of where large vessels have been lifted is the Bermuda dock, which I believe has lifted one *Inflexible* of 12,000 to 13,000 tons displacement.

The CHAIRMAN. That was not just my question. In what cases have large battle ships of over 12,000 tons been safely docked by this dock of yours? Have there been any?

Mr. CLARK. It has never been done.

The CHAIRMAN. There never has been a case?

Mr. CLARK. Not on this dock of ours. This is a new form of dock It was introduced last year and so far only one has been completed Of course, war vessels have been docked on floating docks as far back as forty years ago. The largest iron ships were then docked on wooden docks—American wooden docks. That wooden dock still exists, but by an American, Captain Gilbert, and docked the biggest ironclad of that day, but they of course had only about 7,000 tons displacement

The CHAIRMAN. Docked in a wooden floating dock?

Mr. CLARK. A wooden floating dock, designed by an American. the present day at Wilhelmshaven they build smaller ironclads on shore on a railway and haul them off onto a floating dock and so launch the Perhaps the biggest dock in the world is the floating dock at Hamburg of 17,500 tons, as that could take the very largest vessels in world.

The CHAIRMAN. It is a steel floating dock?

Mr. CLARK. A floating dock of steel. It was built last year. see it is only lately that ships have got to this size.

Senator CHANDLER. State the improvements that the Clark & field Company consider they have made in the construction of floating docks.

Mr. CLARK. The improvement that we have sought after in d with floating docks was this: In a navy you have two types of ve You have a long vessel which is relatively light, and you have a vessel which is very heavy, the cruiser and the ironclad. If you a dock of a length sufficient to lift a cruiser, it will be too long f ironclad. If, on the other hand, you build a dock of a length su for an ironclad, it will be too short to lift the cruiser. It follows, fore, that a dock to suit both classes would have to be, say, 500 long to suit your cruiser, but with a lifting power per foot run

lent to dock the ironclad, which is, we will say, only 300 feet long. hat means either a very much bigger dock than is required, or else ou are apt to strain the short ship from the strain put on it by the verlapping ends of the dock that have no opposing weight on the part f the ship.

Therefore we introduced, or rather reintroduced, this invention, for it really an American one. That is, we use gates. We build a dock ith a lifting power per foot run about equal to the weight of an armored uiser and make it the length of the same. When we come to put a avy ironclad in that dock, we pump out all the interior water only m that portion which lies directly under the ironclad, and lift it as as we can. When lifted as far as the dock can lift by the displacent of its pontoons, we insert gates at each end of the dock, turning it ctically to a graving dock, and pump out the water contained between gates. By this means you get your lifting power and your weight ays equal and always opposite, and there is no strain on the vessel ntever.

he ordinary modern ironclad is a vessel which is extremely weak in bilges, and is quite different from a merchant vessel. One has to great care in docking it, and it is very necessary to have a stiff om. We insure this by always keeping our lifting power exactly osite to the weight of the ironclad, so that, say, when the ironclad ghs 40 tons per foot run, the dock is arranged to give 40 tons lifting er per foot run.

his is our improvement. We have combined a self-docking dock—t is, a dock that is capable of lifting itself all its parts for cleaning repairs—with a dock furnished with end gates. In the old timber k, although gates were used, they were not self-docking, and the ler-water portions could not be got at at all.

The CHAIRMAN. What ships of any magnitude have your docks been ed for?

Mr. CLARK. Do you mean these later docks? Of course, we have ry many types of docks.

The CHAIRMAN. I refer to the particular type that represents what u have been saying. What actual work have you done with that nd of a dock?

Mr. CLARK. To-day they are lifting the first vessel.

The CHAIRMAN. Where?

Mr. CLARK. At Havana; the *Alfonso XIII* is being lifted to-day.

The CHAIRMAN. How large is the *Alfonso XIII*?

Mr. CLARK. The *Alfonso XIII*, I should think, is about a 6,000-ton uiser.

The CHAIRMAN. That is your first actual test?

Mr. CLARK. That would be the first time the dock is in working ler now.

The CHAIRMAN. Is this a dock that is sunk?

Mr. CLARK. It is of course lowered below water, but it is not sunk the sense of the word in which you use the word "sunk." Of course dock is sunk every time it does its business.

The CHAIRMAN. I refer to what was said in regard to the accident.

Mr. CLARK. The accident was a very small one, but it got into the rspapers grossly exaggerated. In the first place, in getting the k ready for work we lowered her down in 30 foot water, and we nd the electric installation did not work. So we had to leave it til the installation was put right. But that was the sum total of the ident. She was never under the water or nearly under the water,

because we took care in testing a new installation to put the dock in such a depth of water that she could not sink entirely. We took a long time putting her right, because we had to send men over to England for men to do it, but there was no sinking in the way the newspaper reports had it. She is, however, now ready for work, and I had a telegram this morning saying that she was ready to-day.

The CHAIRMAN. Is there anything further that you wish to state?

Mr. CLARK. No; I do not know of anything further, unless there are questions which you wish to ask. This type of dock is fairly understood. It has been carefully examined by most eminent naval authorities. I see it has been stated that it is only made for foreign governments, but that is not quite true. Foreign governments have adopted it.

Senator TILLMAN. Has the English Government any floating docks now of this type?

Mr. CLARK. It has one dock.

Senator TILLMAN. Iron?

Mr. CLARK. It has one iron floating dock, but the British Government is now contemplating putting down one of these docks of 15,000 tons at Simons Bay, Cape of Good Hope. I have got out an estimate for that dock. The Russian Government is also making arrangements for one in China. In fact they are becoming very generally adopted. These docks are really an example of evolution. We have been building docks now for over forty years, and as we have gradually found out the weak points of the different docks and what was required in new docks we have gradually perfected this dock. It is not a new invention in the sense of any new principle.

The CHAIRMAN. It is an evolution?

Mr. CLARK. It is an evolution; a combination of several docks. We have pilfered from the world. We have always looked on the floating dock as an American invention, and we have got many hints from American docks. The only thing we have done differently from that is that we introduced many valuable new combinations of old ideas, and have developed in steel what you started in wood. The result of all our progress really comes to this: That whereas your docks of timber over thirty years ago lifted ironclads displacing 7,000 tons, we now, with the aid of steel, propose to raise the modern type of the same vessel, which has not, as a matter of fact, twice the weight of the old ones.

STATEMENT OF B. A. COLONNA, C. E.

The CHAIRMAN. You were formerly connected with the Coast Survey?

Mr. COLONNA. Yes, sir; as assistant in charge of the office.

The CHAIRMAN. Where are you now?

Mr. COLONNA. I am engaged as a civil engineer in the construction of a very large marine railway at Norfolk, and have no connection in any way whatever with any other project.

The CHAIRMAN. Will you not make any statement you may choose to make to the committee on this subject, showing your views and your investigations and experience?

Mr. COLONNA. Shortly after leaving the Coast Survey office I became much interested as an engineer and an investor in the subject of steel docks. I first had my attention called to such docks by articles in the London engineering magazines. I then began corresponding with

srs. Clark & Stanfield, engineers, 11 Victoria street, London, Eng-
. I gained a great deal of information from them that was of great
stance to me, and this, with the statements of Irving L. Scott, of
Francisco, Cal., in a publication by him on the docks of Europe,
uraged me to go into a very close study of this subject. I supple-
ted this whole by interviewing the masters of various large iron
steel steamships that have been repeatedly docked on such struc-
s, all of whom praised the steel docks.

eing entirely at leisure at the time, I thoroughly investigated the
ter of steel floating docks from the standpoint of an engineer in
ying the strength of material and the labor to be performed and
ie capitalist seeking safe investment. I became satisfied as to
t could be done in both directions, and I offered to put every cent
oney I had in the world into a scheme to construct a fine steel
ing dry dock at Norfolk, Va., for the docking of merchant
s. I was in a fair way to secure all needed capital from abroad
n matters over which I had no control drove it off, and I was not
to interest it again. But I am still thoroughly satisfied that steel
ting docks can be constructed that will perform any labor that we
e for them to perform. And such a dock will not only lift the
est battle ships that you have, but you can take it from the moor-
s; you can carry it to sea in moderate weather. If our largest war
were lying outside, near the entrance to Gedney Channel, in a
naged condition, and could not possibly get within the harbor of
w York, and we had such a dock as I have in mind, it could be taken
n to her, and she could be put on it in the broad ocean and carried
to New York and up the Hudson River, or anywhere else you
nted, with a draft of water of at least 5 feet less than the ship
uired to float her when in sea-going trim.

Not only is that the case, but these docks can be taken from one place
another. It is not a matter of absolute necessity that the dock
ould remain at any particular port. You can construct such a dock
Pittsburg, on the Ohio River, take it to New Orleans, and thence to
obile, Pensacola, Dry Tortugas, Key West, or where you please, even
ossing the great oceans if need be.

I was first prompted to volunteer some remarks on the matter of
teel docks on learning that a concrete graving dock was seriously
ontemplated to be located at New Orleans, where the rise and fall of
he waters would make its construction very costly and the deposits of
he Mississippi River make its maintenance very expensive, if not
ntirely impracticable.

Early last summer, on learning of the condition of our Government
raving docks, and of the interest taken in the matter of dry docks
enerally at the Navy Department, I called on the honorable Secretary
f the Navy, and so far interested him in the matter of steel docks that
was called back upon several occasions by Assistant Secretary Roose-
elt and others to express my views.

I can now only reiterate what I said then—that I know from a very
ritical investigation of the whole subject that there is nothing required
n the way of strength, nothing required in the way of stability, noth-
ng required in the way of economy of outlay and maintenance, and
othing required in the way of practicability that could not be per-
rmed by these docks. Nevertheless, I would recommend to the com-
ittee caution. I would construct but one steel floating dry dock now,
nd I would see that that was constructed from the very best possible

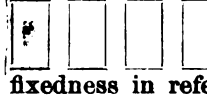
material, and that the details of its construction and first oper placed in the hands of its friends, no matter who did the Then I would be sure of the result when done.

Senator CHANDLER. Will you please explain just the ne floating dock? Mr. Clark has done it, but he did it quite rapid explain the modern floating dock which you have come to bel best dock.

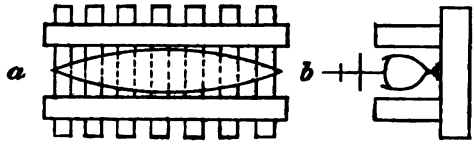
Mr. COLONNA. The modern floating dry dock involves n not heretofore applied to similar structures for the performan lar work. But the material at hand and the advanced kn to-day are utilized, and behold the transformation. The fo team and Concord coach, for the conveyance of travelers, replaced by the locomotive and the Pullman car; the wood frigate has given way to the steam propelled steel-armored b and the steel floating dry dock is destined to furnish as mar trast with its prototype.

The steel floating dry docks of to-day have been construct a demand of the merchant marine. They are designed to lif row ships, which are docked unloaded, and require about lifting power to each foot of length of the dock, and they do admirably, as is attested by all. Design and build one to wide ships, that must be docked loaded with armor plates, and it will require a working capacity of about 35 tons per l It is asked if heavy ironclads have yet been docked on st No; and why? Because docks of steel have not yet been c for that purpose. Is such construction practicable? The e our great battle ships attest its practicability; they float b ment; they hold together by strength of material. Our fl docks will do the same

A modern steel floating dry dock consists of a numb boxes, called pontoons, built and placed in the water sid



The number of these pontoons vary fr many, and their size or displacement rep capacity of the dock. These pontoons fixedness in reference to one another by two great steel b oughly trussed and braced and incased with steel plates, w them, like the caissons, water-tight, but they are longer



across and connecting the ends of the caissons. This is t dock. With its pumps and appliances it will lift a load e displacements less its own weight. Submerge it, float a s pump it out, and it will rise with the ship on it. If it has n ment enough for this, it will raise the load in part and stan this a gate is put across each end, and this forms a great flat b out the water from it, and you have your ship clear.

Its advantages are:

(1) Economy and rapidity of construction.

(2) Economy of maintenance and operation.

Movability.

It is self-docking; that is, one part after another can be taken off, ed on the remaining parts; overhauled, and replaced, so that in a lays the whole can be overhauled, cleaned, painted, etc.

The rapidity of its manipulation. Mr. Irving L. Scott, of San cisco, says, in his book on the dockyards of Europe, that he saw a of 5,000 tons raised from the water and put afloat again in thirty- ninutes.

The thorough control of the dock by means of the system of s, valves, etc., at the critical moment when the ship is just clear- ie water.

ator CHANDLER. How do you control it in that event?

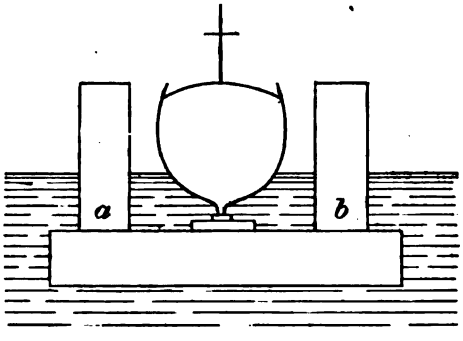
COLONNA. By the arrangement of the pumps and stop valves f the compartments of the pontoons.

ator CHANDLER. Explain that.

COLONNA. The pontoons, of which we have heretofore spoken as ise steel, water-tight tanks, are each divided into many water- ompartments, each opening into one or more waterways. Where mps are located electrical devices indicate at every instant just ndition of these various water-tight compartments—whether it is pumped out too fast or too slow. The whole is under the eye and f a single operator, who, within arm's reach, has absolute con- the whole system. Any pump is made to move faster or slower will and touch, and any valve is opened or closed in whole or

tor CHANDLER. Explain, if you can, the gates that are used e lift is partially completed by the pontoons.

OLONNA. If the dock is capable of lifting any ship by means isplacement of its pontoons, these gates are not required. Sup- is not equal to the work. You pump out the pontoons, they lift can, and at a certain point the whole ceases to rise. An end the dock would then present an appearance somewhat like this:



ip is partially out. Then you resort to the gates, having one in each end of the dock between *a* and *b*. These gates are just gates of a graving dock, but they are very much smaller, being l to shut out only a depth of 5 or 10 feet of water. They are into position and seated on their bearings just as any other dry- tes. Then, as the water is pumped from the deck of the dock ut the bottom of the ship the whole of the water is soon removed is confined space just as in a graving dock.

Senator CHANDLER. Suppose this is a sectional steel floati dock and a ship is placed on it, is it open at both ends like thi picture [exhibiting]?

Mr. COLONNA. It is open at both ends.

Senator CHANDLER. Now, suppose it is in that way [illusti how are pontoons applied to each end to continue the lift, af dock has exerted the whole of its power and has been unable to ship? That I wish you to explain, and slowly.

Mr. COLONNA. They are applied right there [illustrating]. T is not supposed to extend over beyond the ends of the dock as photograph. She could not extend over the dock; she must li the dock. She must be of less length than the dock.

Senator CHANDLER. Very good.

Mr. COLONNA. The pontoon is floated right in here [illust stopping up the end of the dock just like a dry-dock gate.

Senator CHANDLER. The gate is seated across the open end dock so that as the confined space is pumped out the dock c under the gate, and it is sustained on the deck of the dock ship is.

Mr. COLONNA. It comes up under the temporary dry-dock gate being across each end.

Senator CHANDLER. Then what is done after that?

Mr. COLONNA. The pumps are set going and the water is all from the confined space on the deck of the dock and about the of the ship.

Senator CHANDLER. You continue to pump from the decl dock itself?

Mr. COLONNA. From the deck of the dock itself after the have been exhausted and have done all they are able to do. pumping is so arranged for as to be done by the same pumps used for the pontoons.

Senator CHANDLER. The ship is in another floating ship?

Mr. COLONNA. Yes, sir; it is in another floating ship.

Senator CHANDLER. Is that an entirely new method?

Mr. COLONNA. No, sir; at the Portsmouth, N. H., Navy-Ya is a dock that had these ends put into it a number of years never saw the dock, but I have seen a photograph of it with t in position.

The CHAIRMAN. There is nothing mysterious about the upon which it works?

Mr. COLONNA. Absolutely nothing. It is just as plain as d principle has been applied from time immemorial. All that is now is to avail ourselves of the material on hand and the skill a in using it.

Senator TILLMAN. To those who know it. I was going to that if it is expected to make this matter clear we shall hav these gentlemen to furnish us cuts with explanations so as t description of the whole thing and let it go in the report. stand it now after looking at the pictures and this section h cating].

Senator PERKINS. Do you not think it is our mission to ag a plan and leave the details to the Department?

Senator TILLMAN. We have first to get the committee to a then to get the Senate to agree to what the committee decides

Senator CHANDLER. Mr. Colonna, are there any other sug that you can make that would be useful to the committee in co

with the subject of docking that have grown out of your observation and experience as an engineer?

Mr. COLONNA. I only suggest that the steel construction should be of the very best. I have no one to recommend in the matter. I know that American skill is equal to the work. The relations between Messrs. Clark and Stanfield and myself have ceased long ago. I have had no communication with them for a long while.

Senator CHANDLER. You have had no employment and no interest?

Mr. COLONNA No employment from any party concerned and no interest whatever beyond a wish to see my country the foremost. I did not know that Mr. Clark was in this country when I entered this committee room, and have no knowledge concerning the other various interests except what I have heard here this morning.

Senator CHANDLER. Your business in the management of the construction of a marine railway has drawn your attention to this important subject of lifting ships from the water?

Mr. COLONNA. Yes, sir; that and my desire to invest my own money.

The CHAIRMAN. Your views come from no actual experience in the onstruction of these docks?

Mr. COLONNA. No, sir.

The CHAIRMAN. And no connection with them in any way?

Mr. COLONNA. No, sir.

The CHAIRMAN. But from your attention having been called to it nd from some study and investigation which you have made?

Mr. COLONNA. Yes, sir; I went into the investigation with great care, nd in the end was willing to risk every cent I had in the world in the terprise.

Senator CHANDLER. In the dock at Hampton Roads?

Mr. COLONNA. No, sir, the dock was to be at Norfolk, Va., which is ar there.

The CHAIRMAN. A private dock?

Mr. COLONNA. A private dock.

The CHAIRMAN. Have you taken any steps in that direction?

Mr. COLONNA. Yes, sir; I have published some literature, a map or , and a prospectus for private circulation. But I was compelled to t, as I stated before, by matters over which I had no control, but ch drove off the capital.

STATEMENT OF W. N. DYKMAN.

Mr. DYKMAN. I represent, Mr. Chairman and gentlemen of the comtee, the New York Dry Dock and Repair Company, of which I am president. That company owns the Erie Basin dry docks, two e graving docks, one of which is 600 feet and the other 510 feet g.

enator PLATT of New York. State where.

Mr. DYKMAN. The Erie Basin is in the port of New York.

he CHAIRMAN. Whereabouts?

Mr. DYKMAN. It is on the Brooklyn shore, sir, at what we call Red k Point, down toward the Narrows. We own there a large real te, and we operate at the Erie Basin also the floating balance dock, dock of the kind referred to by Mr. Clark, built under the plans of same builder. We have also the sectional floating docks on the t River, at the foot of Pike street. We have all of the large docks he port of New York. We have had those docks for a quarter

of a century—dry docks of both kinds, graving docks and floati docks—not only the sectional floating dry docks, but the rigid fl dry dock called the balance dock, made in one piece.

We have a very large investment, several million dollars, ther we and our predecessors have been operating these docks for a q of a century. On the contrary, the gentlemen whom we underst be behind this project have absolutely nothing, and never hav anything, in the way of dry docks. We do not know the re between them and Messrs. Clark & Stanfield, but we find the prop to be that the Government of the United States shall be permit contract for the use for only one hundred days of a dock of the & Stanfield model. The Clark & Stanfield model is very fi admitted by Mr. Clark to be an American idea; at least, an report of the Department to Commodore Bunce by Construct shiell says that Messrs. Clark & Stanfield very frankly admit th have appropriated an American idea.

The dock at Portsmouth—if I am not right the Admiral will me—the Gilbert dock at Portsmouth, a wooden dock built forty ago, is a floating graving dock with pontoons at each end. Th difference between the dock which was built under Gilbert's pla years ago, and which has been in use in America ever since, a Clark & Stanfield dock is that we built of wood and they built o and that dock is of one piece and their dock has several section

Mr. CLARK. Our dock is self-docking.

Mr. DYKMAN. That is what I was going to add, sir.

The CHAIRMAN. What obstacle is there in the Governmen building a dock like the Portsmouth dock, except that it sha steel instead of wood?

Mr. DYKMAN. None at all. We will contract to build it.

The CHAIRMAN. Your concern will contract to build——

Mr. DYKMAN. Yes.

The CHAIRMAN. To build a floating steel dock covering advantages of the Clark & Stanfield dock, and will take your with other bidders to furnish it in eight months?

Mr. DYKMAN. Well, I will not say eight months. I should consult my engineer before I would say eight months, but I confident it could be done in eight months. I think without an it could be done in that time.

The CHAIRMAN. Do you know of any reason why you could n it as quickly as the other concern?

Mr. DYKMAN. I think American ingenuity can build it as have no doubt we can. I say, asking Mr. Clark's pardon, I t can beat them at that. I think we can certainly build as rapid

Senator TILLMAN. What about the patents?

Mr. DYKMAN. I know of no patents, sir; John Gilbert ma sort of a dock in Portsmouth forty years ago.

Senator TILLMAN. But he did not make a sectional dock wh self-docking?

Mr. DYKMAN. We have sectional docks that are self-docking are forty years old, I was going to say; certainly twenty ye Right to-day in the port of New York we have a sectional floatir

Senator TILLMAN. I am just trying to bring that fact out, dis my own ignorance in order to get light.

Mr. DYKMAN. Answering you, Senator, I will state that we h for twenty years at the foot of Pike street, and have to-day the sectional floating docks.

The CHAIRMAN. Explain to the committee what you mean to be understood by a self-docking dock.

Mr. DYKMAN. I will state what I mean if I may take these books apart for a moment [illustrating]. It is done by linking this section and that section, and bringing this on that and bringing this up [indicating].

Senator CHANDLER. Because of the sections you can do it?

Mr. DYKMAN. Because of the sections.

Senator CHANDLER. If there is only one section, you can not do it?

The CHAIRMAN. It is done because it is all sunk there [indicating]?

Mr. DYKMAN. Yes, sir.

I am against this amendment of Senator Platt's for this reason: The amendment limits the Government to what is called the dock of the Clark and Stanfield model, which is really an improvement of an American idea. If you want a floating graving dock, why not write in the amendment a floating graving dock, unless it is to give these gentlemen, who want to get the subsidy, some advantage that no one else can get?

Senator TILLMAN. In other words, you want to have fair competition.

Mr. DYKMAN. I am willing to take my chances in fair open competition. I must impute some rational motive to these gentlemen in writing in a limitation to the Clark and Stanfield model; but I have been able to find only one.

Mr. DOWNEY. I can explain that motive right here, and perhaps it will save time. It is simply because after the most careful investigation and consideration for a length of time over this subject we have come thoroughly satisfied that the Clark & Stanfield model of a ry dock is absolutely right for the work that we propose to do with it. 'e do not know of any other particular dock that is absolutely right id as we propose to spend over a million of money we do not propose make any mistakes in trying experiments. That is the whole of it.

Senator TILLMAN. Who are "we?"

Mr. DOWNEY. I am the president of the company that has made this position.

Senator TILLMAN. I just wanted to get it down in the evidence.

Mr. DYKMAN. I say if that is true, if the Clark and Stanfield model he best, surely the Navy Department will find it out. They can none less take the Clark and Stanfield dock if you say they are to have oating graving dock. If this dock is better, let them select this lel and furnish plans and give our American engineers a chance to ipete with Clark and Stanfield. The field will be open to them none less, and it will be open to us, and open to our engineers. I believe Clark would deal fairly, but I do not think it ought to be left even Mr. Clark's power to determine who and how many people shall bid that contract.

enator TILLMAN. Under his patent?

Mr. DYKMAN. I do not think he has a patent.

enator TILLMAN. Under his style?

Mr. DYKMAN. I think still he would have a great advantage. If call it a Clark & Stanfield model, it must be a Clark & Stanfield lel; and, unless Mr. Clark says so, I can not bid, and Mr. Clark can how many men shall bid.

r. CLARK. I do not see how I can stop anybody from bidding.

r. DYKMAN. Because you are the only people in the world who own Clark & Stanfield model. That is the reason why.

r. CLARK. There is not anything in the model.

Mr. DYKMAN. I do not think there is anything in it.

Mr. CLARK. We will give you the plans for it. We will be perfectly happy to do so.

Mr. DYKMAN. I believe you would; and I believe you would deal fairly; but I do not think it ought to be put in your power to favor or to discriminate against anyone in this question.

Second, my chief objection is to the hundred days' clause. See what this proposes: Here is a dock that Mr. Dashiell reports he was told by Mr. Clark would cost £100,000 complete, and Secretary Roosevelt says it would cost £100,000—half a million here.

Mr. CLARK. In England, though.

Mr. DYKMAN. I think we could build quite as cheaply as you can.

Senator TILLMAN. We are sending steel rails over there.

Mr. DYKMAN. If you can build it for £100,000, I venture the assertion that we can build it for half a million dollars, and I hope we shall have the chance.

Senator HANNA. We can buy the plate here a great deal cheaper than you can make it.

Mr. DYKMAN. The cost of this dock is to be half a million dollars, and they ask 18 per cent, $90,000, for one-third of the time—one hundred days. If you assume they will get this bounty, then you are paying 18 per cent on the investment. They came here with their statement and said they proposed to spend a million and a half dollars.

Senator TILLMAN. That is 18 per cent for one hundred days, and it would be 54 per cent for three hundred days.

Mr. DYKMAN. Yes, sir; that is it exactly.

Senator TILLMAN. In other words, in two years we would pay for the dock and they would own it.

Mr. DYKMAN. Exactly. That is the proposition.

Senator TILLMAN. It would be another armor business exactly, as Mr. Blackburn says.

Mr. BLACKBURN. I think your mathematics are faulty. I did not know this amendment required any $90,000.

Mr. DYKMAN. The board on this subject that I spoke of reported to the Secretary of the Navy and closed its report with these words:

"This board is of the conviction that all Government docks should be of a permanent character and that their readiness for use at all times should be assured at any cost."

Here is a proposition to give this company $90,000 for one hundred days, and leave the dock free for two hundred and sixty-five days to compete with self-supporting industries. They will to a dead certainty fill their dock every one of those days, and when a battle ship comes limping in it will find a merchant vessel with a hole in her bottom impossible to be gotten off the dock, and the Government will not get the one hundred days.

Senator TILLMAN. Let me ask you a question right there, if it will not interrupt you. I do not think it will break the continuity of your thought.

Mr. DYKMAN. I shall be very glad to answer you.

Senator TILLMAN. How many docks have you now, if any, that will dock one of the battle ships?

Mr. DYKMAN. Our largest docks would dock any but six of the ships of the Navy.

Mr. BLACKBURN. Have you a single dock on which you can dock the *Oregon* and the *Indiana?*

Mr. DYKMAN. No, sir; we have not, but I will tell you what we will do, Senator.

tor TILLMAN. If the Government will give you $90,000, you will ne very quickly?
DYKMAN. I am prepared to make this offer here, and I think r Platt will answer for the responsibility of the concern.
tor PLATT of New York. There is not any doubt about its sibility.
tor CHANDLER. What is the name of your organization?
DYKMAN. The New York Dry Dock and Repair Company. We ad the *Chicago;* we could have taken the *Maine.* We can take ttle ship of the class of the *Maine.* We could give the Govern- -day the two graving docks for the large vessels; we could give ting docks that would take all your small boats; and we could repair shop in which you could make any repairs that you l. And we will do more. If we can come anywhere near what wney asks, we will build an 800-foot graving dock, and we will for the whole year, every day in the year, for $115,000.
tor TILLMAN. Of what depth?
DYKMAN. A depth that will take anything you build.
tor TILLMAN. Anything afloat?
DYKMAN. Anything afloat and things that are not now afloat. e will do more. We will contract that every time a vessel too r our existing docks wants docking we will charge them at the rate and turn in and divide that with the Government.
tor CHANDLER. You mean that you will give the Government nchise every day in the year?
DYKMAN. They shall own the dock, practically. We will not hing in that dock any day, unless the Government says so; and this limitation. Of course we do not want the Government to ships that will compete with our other docks. I want to make ly clear my proposition. We will build the dock. The Govern- hall have the exclusive use of it, and the Government is to have tion or right to put in vessels like the *Kaiser Wilhelm*, the *Cam-* the *Lucania*, the *St. Paul*, or the *St. Louis.* Those I think are y trans-Atlantic liners that will not go into our present docks. y ship that can not go into our present docks may at the option Government go in, and we will do the work and we will divide ckage with the Government, and that shall be a graving dock, the satisfaction of the Navy Department.
tor CHANDLER. Do you mean a floating dock?
DYKMAN. No; I mean a graving dock.
tor CHANDLER. A stationary dock?
DYKMAN. Yes; because we should not build a floating dock for ships. We should build a graving dock for a battle ship.
, you see right here what these gentlemen ask. They are going $90,000 or some considerable sum of money that will pay all unning expenses and leave them some profit, and for 265 days in ar they are going out on the market to break rates, to ruin every g industry along the Atlantic coast.
BLACKBURN. If it would not trouble you I should like to ask just vhether that is the feature of competition which you object to.
DYKMAN. I do not fear competition, sir.
tor TILLMAN. You fear the subsidy?
DYKMAN. I fear the subsidy. I fear the man who gets $90,000, cent, in a dock.
BLACKBURN. You want to get $115,000.
DYKMAN. For something, sir, that I gave the Government for

365 days in the year, and which will cost over a million. And I do not state that it will cost $1,500,000 when in truth it costs only $500,000.

Senator MARTIN. How long would it be before you would have your dock ready to be used?

Mr. DYKMAN. It would take much longer than for a floating dock. We can not build a graving dock in a short time.

Senator MARTIN. What time would it take?

Mr. DYKMAN. I think it would take two years. It would take the best part of two years, at any rate.

Senator HANNA. Do you say that it would take more than a year?

Mr. DYKMAN. Yes, sir; it would take nearly two years, I think. I wish to say this. They are not only going to demoralize rates in New York, but they are going to demoralize rates in every other city on the Atlantic coast, because the vessels go where they can get cheap dockage, and it will be the certain ruin of every one of these industries established along the coast.

Mr. BLACKBURN. I do not want to interrupt you, but let me ask you if there are any other docks in New York except those embraced in the syndicate that you represent?

Mr. DYKMAN. I do not represent a syndicate, sir. There are lots of docks, but no large docks. We have all the large docks.

Let me say that up to the time when we took hold and took charge of these docks, to make this company, the docks had been warring against each other until every one of them went through bankruptcy in one shape or another, and they have not yet paid a dividend either, under one consolidated management. The war of rates that will be brought on is pretty likely again to make New York docks as unsafe as they were when the shipowners intervened to cure that condition the last time.

There is another point that I want to make. The dry dock is simply a tool. It is the chief tool used in repairs. As soon as you give to a private company the Government docking, you must give them the Government repairing, because the tools have got to be taken where their dry dock is, where the ship is in their dock. More is behind this than even the $90,000 a year. The whole repairing business in that dock is involved.

Senator PERKINS. As a matter of fact, if you take a ship you do not permit outside machine shops at your dock; you put obstacles in their way so as to make it unprofitable. That is the way on the Pacific coast, at least.

Mr. DYKMAN. We do not encourage it. We have a company that is associated with us that does the repairing business.

Senator PERKINS. I am a steamship man and I know that is the case on the Pacific coast. We have had a good deal of experience in that line and we might as well understand it. The fact is as you have stated?

Mr. DYKMAN. It is the fact.

Senator PERKINS. The docking of a ship carries with it the repairing?

Mr. DYKMAN. It does; and as we are in the repairing business we manage to get most of the repairing of the vessels that come on our dock.

Mr. DOWNEY. No part of our proposition looks toward the making of the Government repairs. To Secretary Long I said specifically, we believe in the Government doing their own repairs. We do not propose to do any part of the Government repairs. They have got a navy-yard in Brooklyn and they have men and machinery, and it should be kept

If our proposition does not specify it, it means that we do not pose to do any part of, the Government repairs on the warships in e we should establish this dock.

Ir. DYKMAN. There are heavy tools that can not be moved.

'he CHAIRMAN. It is now a little past 12 o'clock. The committee heard both sides of this case and, perhaps, it is impracticable to go further now. Some members of the committee desire to go into the ıate.

enator TILLMAN. Does Mr. Dykman wish to continue? Would he to have more time?

enator CHANDLER. I do not see how we can go on further to-day.

enator TILLMAN. But if we are not to have another meeting of the ımittee I just wanted to know if Mr. Dykman is satisfied that he had the time necessary to present his case?

Ir. DYKMAN. I could go on further, and I was intending to say more, I think what I have to say further I can perhaps submit to the mittee in writing.

he CHAIRMAN. If you can do that, there will be ample opportunity. had better do it pretty soon. I would make the same suggestion to Senator Blackburn.

r. BLACKBURN. That privilege will be extended to both sides, I erstand.

ıe CHAIRMAN. The committee are quite limited in this matter as to . Anything that either side—using that term on this question— e to submit to the committee they will send in as soon as possi- because the naval appropriation bill will be here in the course of a , I presume.

. BLACKBURN. The chairman and the committee have been very eous. I should have been glad to have heard Mr. Dykman until as entirely through. I should also have been glad if Mr. Downey t have had a few minutes. He is the president of the company ng this proposition.

ıator CHANDLER. I think we ought to have one more meeting.

. BLACKBURN. And especially I should like to have Mr. Dashiell he Admiral make statements.

e CHAIRMAN. On what day can we have another meeting?

ıator TILLMAN. I move that the committee adjourn until Satur- at 10 o'clock a. m.

e motion was agreed to.

SATURDAY, *March 26, 1898.*

e committee met at 10 o'clock a. m.

esent: Senators Hale (chairman), Perkins, Chandler, Hanna, ıan, Butler, and McEnery; also Rear-Admiral E. O. Matthews, ıtant Naval Constructor R. B. Dashiell, Hon. Israel F. Fischer, yonel Clark, Hon. L. E. Payson, Mr. W. N. Dykman, Mr. T. Clyde, Vallace Downey, and Mr. Frank B. King.

STATEMENT OF REAR-ADMIRAL E. O. MATTHEWS.

miral MATTHEWS. Mr. Chairman, as to the proposition as made e proposed amendment offered by Senator Platt, it strikes me that ather inadvisable that the Government should enter into any ment of that kind to run on time. In connection with a floating the question as to where repairs must be effected is always com- p.

Early in the present Administration I suggested to Secretary Lo that in order to increase the number of dry docks I thought it wou be well to enter into some arrangements with private companies whe the demands of commerce call for a dock, simply to make an arrangeme with them to appropriate such money as would render the dock ava able for docking battle ships, the Government to pay the difference expense, citing the case of the German Government. The North G man Lloyds were proposing to build some large wooden docks Bremerhaven. The German Government stepped in and offered appropriate, I think it was two million marks, towards the enterpris provided the Lloyds would put in stone docks, to be subject to the u of the German Government when needed. They were to pay this lu sum, but not to enter into any agreement for running them for a ter of years, as is proposed in this instance. It would frequently be th case that we would not need the dock probably once a year, yet w would be called upon to pay a large sum per annum, whatever it migh be, and at the end of twenty years we would have nothing in return If they went up to the limit of the ninety thousand dollars as propose in the amendment it would make $1,800,000 that we would have pai for the use of a dock belonging to somebody else.

The CHAIRMAN. You do not think that would be a good trade?

Admiral MATTHEWS. I do not think it would be a good trade at all sir. It would be very difficult to accommodate that dock at the present time alongside the Brooklyn yard if towed up there, because it is a very large thing. It is a constant trouble when a ship is in there, as it is not as convenient for working on as it would be if she were in a graving dock.

The CHAIRMAN. What is your general view about the merit of the steel floating dock as compared with permanent docks, with graving docks?

Admiral MATTHEWS. I think for Government purposes the concrete graving dock is the proper thing to have. It is the cheapest in the end and by far the most useful.

The CHAIRMAN. Do you not think there are places, for instance near the mouth of the Mississippi, where a steel dock is the best that could be used? What is your view about that?

Admiral MATTHEWS. I suppose that dock would be the best that could be used there. It is going to be a very difficult thing to construct a dock of any kind at that point. The rise and fall of the tide, as you may say, which is annual, is 17 feet. That being annual, you must have the dock at least to the full depth at low water. That would require a 30-foot dock to be 47 feet deep below the high water. That is in an alluvial soil. The entrance to the dock would have to be well back from the bank of the river. Then when you would want to dock a ship, you would probably have to dredge it out in all cases. You could not keep it free of the mud.

In regard to the floating dock, there is an eddy opposite Algiers. The bottom, as well as I recollect, out about 170 feet from the shore reaches a depth of 54 feet at low water. That depth would be required for any floating dock in order to sink it deep enough to take in a battle ship drawing, say, 30 feet, because this is supposed to dock battle ships when they are injured. The deepest draft of the present battle ships is 27 feet. When injured they begin to draw more water, and we ought to count on at least 30 feet.

The CHAIRMAN. In any case, in taking into account the dimension

dock and its depth, you would take into consideration the fact that ttle ship, when injured from any cause, lies lower in the water?
dmiral MATTHEWS. Yes, sir.
he CHAIRMAN. You would make an allowance of about 3 feet?
dmiral MATTHEWS. At least.
he CHAIRMAN. Above the average draft?
dmiral MATTHEWS. Yes, sir. I would make that allowance at low er. A ship is apt to be injured just as frequently at low water as igh, and if injured and needing a dock, the leakage exceeding the city of the pumps, you want to reach the dock at once. You arrive e a moment after high water, and you have got to wait 12 hours re you can have a chance to get in it. In the meantime you can beach that ship as we could beach the old ones.
he CHAIRMAN. How many of the docks recommended by the board he programme now before Congress would have the capacity ired under the conditions you have just stated, allowing 3 feet e than the draft for injuries?
dmiral MATTHEWS. As I remember, the dock at Boston was mmended to be 30 feet at mean low water. Mr. Dashiell will bably recollect about that.
Ir. DASHIELL. At mean high water, Admiral, I think, sir.
dmiral MATTHEWS. It states it in the report "mean high." I think t was pointed out as a mistake.
Ir. DASHIELL. I do not think so, sir. It will cost so much to get it nean low water and put it at mean high—not at spring tides, but n high.
he CHAIRMAN. If that is true, would it meet the purpose?
dmiral MATTHEWS. It would not meet the purpose at all, sir.
he CHAIRMAN. It would not be a dock useful at all times?
dmiral MATTHEWS. No, sir. Take the defense of Boston. A battle would naturally be kept by her commanding officer at full draft to ready for any duty that might be called for. A vessel of the Indiana s would draw 27 feet. She gets a punch below the belt. She begins sediately to deepen her draft. If, for any reason, her pumps can at least exceed the leakage, she is going to increase her draft, and keep on increasing it. She gets to the yard a moment after high er, and she is to go on sinking for twelve hours before they will be to use that dock.
he CHAIRMAN. Then you do not think a dock 30 feet at mean high er is a desirable one to build there?
dmiral MATTHEWS. No, sir; I think all our docks should be at mean water.
he CHAIRMAN. That would cost more?
dmiral MATTHEWS. It would cost more, but it would save the battle ; it might save many times the value of the dock, because the tle ship at that time is worth a great deal more than the $5,000,000 ended on her.
he CHAIRMAN. Your mind is very clear on that point?
dmiral MATTHEWS. Yes, sir.
he CHAIRMAN. You would not recommend that a 30-foot dock at n high water should be built there?
dmiral MATTHEWS. No, sir; as they have a rise and fall of tide e, mean, I think of 9 feet 6. Probably we might let it go at, say, half

he CHAIRMAN. That would not be as good as at low water?

Admiral MATTHEWS. It would not be as good as the 30-foot doc

The CHAIRMAN. Now, take the next dock that the board recommen the dock at League Island.

Admiral MATTHEWS. There they have a rise and fall of tide of ab 6 feet; and if that word "high" stands, as Mr. Dashiell says, I un stood it was a typographical error——

Mr. DASHIELL. No, sir; it was not.

Admiral MATTHEWS. There would be the same trouble again.

The CHAIRMAN. You would not recommend a 30-foot dock there mean high water?

Admiral MATTHEWS. No, sir; not at any place.

The CHAIRMAN. Now, the next one recommended is at Norfolk.

Mr. DASHIELL. The board recommended one at Nofolk if they dred the channel.

The CHAIRMAN. I am coming to that by and by.

Admiral MATTHEWS. At Norfolk it does not make so much differen because there is a rise and fall of tide there of only 2 feet.

The CHAIRMAN. Now, the next one.

Admiral MATTHEWS. The next one is a floating dock at Algie That can be of any depth. It is merely a question of building up t sides of caissons. Then at Mare Island they propose 30 feet at hi water. We are dredging there, but with our present appropriation are dredging but 28 feet at low water and 30 feet alongside the t walls and in front of the present dock, that is, 30 feet at low water. think all the docks should be arranged for 30 feet at low water.

The CHAIRMAN. How much tide is there?

Admiral MATTHEWS. About 4½ feet.

The CHAIRMAN. You would have 30 feet at low water there?

Admiral MATTHEWS. Yes, sir.

The CHAIRMAN. Now, leaving the question of the depth of docks a your view as to what it should be, take the first one, Boston. Wha the depth of water there in the channel?

Admiral MATTHEWS. I think they have now at low water 27 or feet. There are a few lumps there. I do not know whether they h been dredged out or not.

The CHAIRMAN. Of what use would be a dock built there at 30 f depth, mean low water, until the harbor is dredged to give a cor sponding depth?

Admiral MATTHEWS. Until that time it would not be, but the do if built properly, should be a thing for a thousand years.

The CHAIRMAN. But it could not be used, and it would practically so much capital sunk, until the harbor was dredged?

Admiral MATTHEWS. Yes, sir; until the harbor was dredged to t proper depth.

The CHAIRMAN. That is the condition in Boston to-day?

Admiral MATTHEWS. Yes, sir.

The CHAIRMAN. If we had there to-day just such a dock as y desire, with the depth you think essential, it would be of no practi use to us for the great battle ships?

Admiral MATTHEWS. No, sir. That is, at low water we would n be able to get a battle ship there if she drew 30 feet.

Senator HANNA. Is there not some place within the limits of the h bor of Boston available without confining yourself to the Navy-ya location?

Admiral MATTHEWS. Then you get out exposed to the fire of t enemy.

HANNA. Would a mile make much difference as to where the ocated there?

MATTHEWS. You have got to go out more than a mile unless dredging. It is easier to dredge, and it does not cost so e.

HANNA. Will dredging be required at the entrance of the only at the approaches to the dock?

MATTHEWS. No. Between the lower part of East Boston—e name of the point there—the old fish house, and South is lumpy.

HANNA. It would not be so difficult to dredge?

MATTHEWS. It is very easy to dredge. It is soft mud.

AIRMAN. Are any fortifications other than those which are needed in Boston to protect that harbor?

MATTHEWS. I believe the Army is putting up batteries to e anchorage over on the Nahant side. They have those and en, and I believe also they are fortifying Point Allerton.

AIRMAN. Now, go to League Island; that is the next. What lition there as to accessibility?

MATTHEWS. We have now 27 feet, and I believe the plans lge to 30 feet.

AIRMAN. If a battle ship of 27 feet draft were injured and t in the water, she could not get into a 30-foot channel?

MATTHEWS. Well, she could work through and be dragging at that would be only at the moment of low water.

CHANDLER. She would have to wait for high water.

MATTHEWS. Every moment it would increase. Giving her she could go ahead.

AIRMAN. Now take Norfolk. What is the depth of water

MATTHEWS. At Norfolk we have 26 feet. They are dredg-k, to 30. I think that is their contract now.

HANNA. How much water is there at Newport News?

MATTHEWS. There, I think, it is something like six fathoms.

AIRMAN. There is great depth there?

MATTHEWS. Yes, sir; there is plenty of water there. There that they propose building there. I was asking the official before yesterday about it. They propose building a dock to battle ships, to be 1,100 feet long, with a concrete entrance. a wooden dock. Now, as a mercantile venture, a merchant for his own fortune. He is not counting his great-grandchil-wooden dock is cheaper, and will last to make your fortune, not last for your great grandchildren. The Government has e the hereafter into consideration.

AIRMAN. You do not say that a dock built there of wood, length and depth and water, would not be for years to come ible and useful?

MATTHEWS. Oh, there is no doubt of that.

AIRMAN. But you would not recommend that the Govern-l that kind of a dock for itself?

MATTHEWS. No, sir. There is a case I think where it a good thing for the Government to supplement that enter-pay them a bonus if they would substitute concrete for

AIRMAN. You have stated the conditions at Algiers?

MATTHEWS. Yes, sir.

The CHAIRMAN. Now, as to Mare Island. What is the con there as to accessibility in the channel?

Admiral MATTHEWS. At the present time off Pinole Point the nel is at the lowest part only about 19 to 20 feet at low water.

Senator PERKINS. Twenty-two feet, the pilots report. I have a here to that effect.

Admiral MATTHEWS. We had a survey made by the Coast Su

Senator PERKINS. Have you the last tracing of the Survey st *Rodney*, which has been surveying there?

Admiral MATTHEWS. As I recollect it, that was about two year

Senator PERKINS. The *Rodney* was engaged upon that surve year.

The CHAIRMAN. What did your survey determine?

Admiral MATTHEWS. It gave 19 feet as the lowest point.

The CHAIRMAN. What would it be at high water?

Admiral MATTHEWS. It is 4 feet 6 there. That would be 23 fe

The CHAIRMAN. What could a battle ship do in the way of gett there?

Admiral MATTHEWS. She could not get in there. But we hav at the Mare Island yard a large plant. You do need a battle-ship there.

The CHAIRMAN. Would you build the dock first and then d afterwards, or build and dredge simultaneously?

Admiral MATTHEWS. I would dredge simultaneously with the l ing of the dock.

Senator PERKINS. Permit me to make a statement right here. quite familiar with that point. San Pablo Bay is a great highw commerce. We exported from California last year nearly a n tons of wheat, and 90 per cent of it came from Port Costa, on tha At Point Pinole there are two miles and some rods where the de from the mines made a deposit of light mud. The estimate of th of dredging it is about $150,000. That must be done in the inter commerce regardless of the navy-yard, which the Admiral is so oughly familiar with. An appropriation has been made for dre between Vallejo and Mare Island. This is simply a bar that has formed there by the floating detritus or débris that has come dow river. That will be dredged in the interest of commerce regardl what our Government may require at Mare Island. Therefore simply a partial impediment.

The CHAIRMAN. What depth will it be dredged?

Senator PERKINS. I have letters from pilots stating that they taken several loaded ships this year from Port Costa to San Fra Bay drawing 26 feet of water, and there was plenty of water the between the keel and the débris.

The CHAIRMAN. Admiral, you do not know what the proposit for dredging and to what depth?

Admiral MATTHEWS. No, sir.

Senator PERKINS. About 6 feet the Coast Survey recommend for 2 miles, a channel of 400 feet.

The CHAIRMAN. Six feet added to 19 would make 25 feet.

Senator PERKINS. But the Admiral has his figures transpo think; because, as a matter of fact, the last tracing I had of the s showed 22 feet. I got it from the office of the Coast and Geodeti vey. Then the pilots are without any trouble or danger taking that draw 26 feet. I have a letter from the Union Iron Works s that the Oregon could have gone up there without any trouble, b

es were willing to receive her at the harbor, and therefore they
towage.
al MATTHEWS. The tracing that I have is only about 21 and
t the northern end of their survey. It shows some 19 feet.
all soft mud. It is just the deposit from the mining there.
r PERKINS. The mining has now stopped, and when the
s once dredged there will be no trouble there.
AIRMAN. That is the last then of your recommendations.
a anything further, Admiral, that you wish to present to the
e on this subject?
al MATTHEWS. On the general subject of docks?
AIRMAN. Yes, on this subject.
al MATTHEWS. Yes, sir. The other day I received a copy of
hat had been sent to the House Naval Committee—I believe
ramp—advocating wooden docks. He compared the League
ock, which cost $548,700, with the Mare Island dock, which
72,000.
AIRMAN. What dock do you refer to that cost $2,772,000?
al MATTHEWS. The stone or concrete dock at Mare Island.
AIRMAN. What are its dimensions? What is its depth of

al MATTHEWS. The dock at Mare Island gives 27 feet 6 inches
sill. You can get really more than that. It is 459 feet on
s. That is all concrete. A short time ago, in answering the
of maintenance and so on, when writing about Mare Island,
olutely sure, I telegraphed the commandant at Mare Island,
is the leakage of your dock?" "Practically nothing." In
er of Mr. Cramp to the House they represent the running
of the League Island dock, which was opened about the same
the Mare Island dock was——
AIRMAN. The wooden dock?
al MATTHEWS. The wooden dock at League Island. The
the "dock proper" they put at $10,000. At Mare Island
Both were opened, I believe, in 1891. In regard to the first
ose docks, the Mare Island dock was nineteen years in build-
was built by driblets. It is a wonder, really, that it did not
e or four million dollars. You had to build just as you got the

r TILLMAN. What would you estimate such a dock to cost
ll at once?
al MATTHEWS. Well, for a larger dock than that of concrete
ates were a million and a quarter.
AIRMAN. What is that dock now good for? Suppose the large
ssels could get up to her, could she take them in with security
ort?
al MATTHEWS. She takes in anything but battle ships.
r PERKINS. It is constantly in use.
r HANNA. By the Government?
r PERKINS. Yes, sir.
al MATTHEWS. Oh, yes. The only thing is as to the inverted
ntrance. At the time that dock was built we did not count on
nt shape of ships' bottoms. Now a section of a battle ship's
s like a box with the corners rounded off, and the inverted
he entrance would just take a little more off the corner.
m that she could take a battle ship.
r TILLMAN. Can you not change that arch with a little cost?

Admiral MATTHEWS. It would cramp the altars. Inside it wo have to be cut away somewhat in order to give room for work. If work on the bottom of these ships you want light and air. The al would come very close to her bilges. So I proposed, as Chief of Bureau, to cut out that arch, but the constructors opposed it on ground that it would not be worth it after they got in, owing to the al being too close to the ship's side.

Now, in regard to the letter misrepresenting facts, the $10,000 repairs to the League Island dock is a proper statement. After battle ship *Massachusetts* was launched (I do not mean after she armored or anything of that kind) she was put in there for some o hauling, and while they had some of the bottom plates off, the al of the bottom of that dock, three or four of them, burst off and i began to flow in. The dock at this time has had $10,000 expende repairs to the body of the dock. Then the abutments are tendin move in, and we have $64,000 now available for repairs of the co of that dock, where the tops of piles and altar backing have rotted

The CHAIRMAN. You are speaking of the League Island dock?

Admiral MATTHEWS. Of the League Island dock. These are repairs that are needed at this time, and they would have been sta but for the reports recommending a change in widening the entra which would have interfered with this work.

The CHAIRMAN. You recommended at League Island the buildin another dock?

Admiral MATTHEWS. Another dock of concrete.

The CHAIRMAN. Just as at Mare Island?

Admiral MATTHEWS. Yes, sir; now instead of the $75,000 expen at Mare Island for repairs to the dock (because the caisson, the flo the pumps, and all that are common to all docks, and you can co them out) in the long time of building that dock they had built a d caisson, which is a little boat of light draft with an exaggerated k which made the caisson.

The CHAIRMAN. Which dock are you speaking of?

Admiral MATTHEWS. Mare Island.

The CHAIRMAN. You have left the League Island dock?

Admiral MATTHEWS. Yes, sir; the $10,000 were properly expen on repairs proper to the dock at League Island.

The CHAIRMAN. You mean that the report as to the expenditur League Island is correct?

Admiral MATTHEWS. Yes, sir.

The CHAIRMAN. But it is incorrect, or at least it is misleadin regards Mare Island?

Admiral MATTHEWS. Yes, sir. At Mare Island, as to the expe charged to the dock proper, it was opened in 1891, and that year have $700 charged to it. Upon examining the books I find it was clearing up around the dock, but as the only appropriation to wh this expenditure could be charged was the appropriation for the d and as it was a legitimate charge, it was charged to the dock pro Then a new caisson was included in the $75,000. That had noth whatever to do with the dock. Then the traveling crane, which t have not got at League Island, was put in, making up the $75,000. regard to the actual cost of the dock proper, aside from the $70 1891, which was from the appropriation for the dock proper, but for clearing up around the body of the dock after it was opened

1894 there is another small charge of about $150, and in 1896 there comes another one for putting screens around the steel capstans to protect them from the dirt. A little of the appropriation was continued over into 1897, making altogether about $1,600 that has been charged to the dock proper, but none of which really had anything to do with repairs to the dock.

The CHAIRMAN. That is a small matter, involving only a few hundred dollars. Since the time when it was ready for use, in 1891, what do you think, on an average, has been expended annually for keeping it in order?

Admiral MATTHEWS. For the dock proper?

The CHAIRMAN. Yes, not to be accurate, but to give some general estimate.

Admiral MATTHEWS. A liberal estimate of the expense would be $50 a year.

The CHAIRMAN. Practically nothing?

Admiral MATTHEWS. Practically nothing.

Senator TILLMAN. In other words, when you get a good concrete dock you have got a dock forever?

Admiral MATTHEWS. You have got a good dock, and every year that dock is down it is improving; it is getting harder and stronger.

The CHAIRMAN. It is of concrete, faced with granite?

Admiral MATTHEWS. The proposition was to build it of concrete and face it with granite. A great deal of capital has been made in favor of the wooden docks by taking as an example the Boston dock. That is called a stone dock. It was opened in 1833. At that time we did not have the Portland cement that we have to-day. The backing of that dock was stone rubble laid in hydraulic lime, which is about what we call Rosendale cement at the present time. It dissolves under the action of salt water. It gets cold up in Boston. The lime dissolving out, the water pressing in from behind, it got through to the altars. I was captain in the yard there along from in 1887 to 1890. I had charge of it. The altars were all tipped back, and in no case did the cement of the seams adhere to the stone on both sides; it was all broken out.

The CHAIRMAN. In short, your opinion is that where we can we had better build granite or concrete docks instead of wooden docks?

Admiral MATTHEWS. Yes, sir; concrete faced with granite. The concrete is cheaper than granite itself, but for the facing you want either granite or vitrified brick.

Senator PERKINS. How do the teredo, the limnoria, and other marine insects affect wooden docks here on the Atlantic?

Admiral MATTHEWS. The Norfolk dock was opened in 1889. It is a wooden dock. When the *Texas* was put in that dock, several years ago, for extensive alterations, the caisson was placed in the inner groove, thus exposing the outer groove to the salt water. That outer sill and groove were of creosoted oak timber. A couple of years ago I was down there when they were repairing it, and I directed them to send me samples, not selecting them, but just taking them as they came, with no selection at all. This box which was in my office was filled with small chunks of oak timber. You could smell the creosote still, but the oak was thoroughly honeycombed. You could not get a quarter of an inch of solid oak anywhere. The entrance way to that dock was completely eaten away. In 1896 I gave the money for replacing that with creosoted timber, and then sheathing it with quarter-inch

iron, as the only means we had of approaching any protection from teredo. The teredo begins to work in June and it works lively up September.

It was the same way at Port Royal. The entrance there was cr soted. Last year when down there, taking a skiff I went to the (charge culvert. On one side it was creosoted timber; on the ot side it was 4 inches, uncreosoted. I took my cane and just chucke and these things dropped out 6 inches, hanging down almost as la as a little finger.

Senator PERKINS. You have the limnoria, the little insect that e from the outside?

Admiral MATTHEWS. No, I do not think we have so many limno That is more at the North.

Senator PERKINS. But you have the teredo?

Admiral MATTHEWS. We have the teredo. It is a bivalve. attaches, a mere pin-point, to the surface of wood and then grows in an angle of about 40 degrees.

Senator PERKINS. And completely honeycombs it?

Admiral MATTHEWS. It enlarges to about a quarter of an inch a completely honeycombs it.

The CHAIRMAN. Then it will ruin the dock in time?

Admiral MATTHEWS. Yes, sir; wherever exposed to running s water.

Senator PERKINS. I will state for your information, Mr. Chairm that at Mare Island the fresh waters of the San Joaquin and the S mento rivers meet the tide, and it is death to all marine insects. have at the magazine wharf at Mare Island piling that has been dri there thirty-two years and is in a perfect state of preservation, whil the harbor of San Francisco, at Point Tiburon, the terminus of the S Francisco and North Pacific Railroad, that runs up the Sonoma Vall called the Donoghue road, I have seen a pile that was eleven mon old and 90 per cent of its strength had been honeycombed out and ea by the teredo. That is the clear water flowing in by the tide arou Point Tiburon. The life of a wharf in San Francisco that is not p served by creosoting or by covering with felting or copper or some ot practical means is about eighteen months. That is about the life any wood exposed to the marine insects of that harbor.

The CHAIRMAN. This hearing is practically with regard to the amen ment providing for the use of a floating dock as proposed by The Int national Dry Dock and Construction Company. If we go too much i general considerations we shall never finish on that point. Admiral there anything in addition to what you have said that you wish to sta

Admiral MATTHEWS. I do not know that I have anything further submit. There is a good deal about the steel floating dock that I thi is yet problematical. As I understood these gentlemen the other d one proposition was that it would be useful in going out to sea in c a battleship was injured, and taking her up at sea. I do not belie that it would act once a month, the water would have to be so smo to apply that dock, because when you get it under and there came bump of the battle ship it is not much motion, but it is like an ea quake; it is irresistible.

The CHAIRMAN. There is something behind the blow?

Admiral MATTHEWS. Yes, sir, you have got 12,000 tons behind blow.

Senator TILLMAN. It will injure either the ship or the dock?

Admiral MATTHEWS. Something has got to go.

In reply to the question by Senator Tillman, in regard to the estimates ade for these docks, I should like to say that the estimates we made ere for 30 feet at mean low water, not as these docks have been built r 25½ or 26 feet at mean high water. That makes a very great differ-ce.

Senator TILLMAN. You are leaving some room for still larger vessels be built hereafter?

Admiral MATTHEWS. And for a vessel to be injured, sir. In battle ssels are very apt to get injured.

Senator TILLMAN. And the vessel may fall a little below its normal aft?

Admiral MATTHEWS. Yes, sir.

Senator TILLMAN. It may be deeper?

Admiral MATTHEWS. Yes, sir.

Senator PERKINS. I should like to ask the Admiral just one question, you please, Mr. Chairman.

The CHAIRMAN. Certainly.

Senator PERKINS. It sustains his argument in relation to the advan-ges of graving docks or basin docks over floating docks. I will state at the battle ship *Oregon* was docked, I think, three times at Hunters oint basin dry dock, in San Francisco. What was your report in rela-on to the manner in which she rested upon the blocks and was handled the dock?

Admiral MATTHEWS. That I had nothing to do with. I have nothing do with the docking of ships.

Senator PERKINS. But it was done under the direction of the naval thorities?

Admiral MATTHEWS. It was done under the direction of the naval thorities, but it did not come under my bureau at all.

Senator PERKINS. As a matter of fact, I am informed that it was ost satisfactory in every respect. That dock cost altogether, in early ys, it is true, about a million dollars.

Senator HANNA. Is that a wooden dock?

Senator PERKINS. No, sir; it is concrete with granite facing.

Senator HANNA. It is a private dock?

Senator PERKINS. Yes, sir.

Senator HANNA. And is large enough to take in a battle ship?

Senator PERKINS. It takes in the *Oregon*. The *Oregon* has been cked three times there.

ATEMENT OF R. B. DASHIELL, ASSISTANT NAVAL CONSTRUCTOR.

The CHAIRMAN. State your rank and present field of duty.

Mr. DASHIELL. Assistant naval constructor, United States Navy, duty in the Bureau of Construction and Repair.

The CHAIRMAN. You have read the amendment under consideration the committee, which provides for a scheme for a specified floating ck in New York?

Mr. DASHIELL. Yes, sir.

The CHAIRMAN. State first to the committee something of your perience and investigation into subjects-matter of this kind, and en tell us what you think of this proposition.

Mr. DASHIELL. My experience with regard to docks is not that of expert in docks, but of a line officer for eighteen years, and an istant constructor for three years. Of course, I have been interested

in docks. Last summer I was put on a board to report to the De ment what was necessary to increase and put on an adequate footir docking facilities of this country. I had heard of floating doc one of the types of docks that could be used for war vessels. Of c I was familiar with the ordinary type of pontoon wooden floating which we have in this country in large numbers, but having several scientific articles in regard to the development by an E firm of this type of floating dock into a steel floating dock whicl been very successful, I suggested to the Department that it wou advisable to send a member of the board to England to look in matter. The Department detailed me for this duty, and in conn therewith I have made two trips to England and studied the subj thoroughly as possible.

I saw the first steel floating dock at Newcastle, where I witn the launch of the Havana dock. Through the courtesy of the bu and Mr. Clark, the designer, I went all through that dock and ined it very critically. I wrote a full description of it for the rep the dock board, so there is no use going into further detail. I als other floating docks designed by Clark and Standfield, and some crete and granite docks. I went very carefully into the details construction of the Clark and Standfield dock, and satisfied n very thoroughly that it was an entirely practicable and efficient ture for lifting our battle ships or long cruisers

There is nothing specially new in the structure beyond its bei assemblage of good mechanical details of construction which had derived from long experience. Everything about it struck me as very efficient and very practical, and the system of convertin floating dock into a graving dock of an adjustable length was a good one, in my opinion. The result of all my investigations wa I came to the conclusion that the floating dock was a very impo tool for us to possess in the Navy.

The CHAIRMAN. Can we build it?

Mr. DASHIELL. We can build it without any difficulty.

Senator TILLMAN. Do you mean that it can be built at a navy or built by American ingenuity and materials?

Mr. DASHIELL. It can be built at a navy-yard. It can be bu American engineers outside better than in a navy-yard.

The CHAIRMAN. It can be built as we build ships, by contract

Mr. DASHIELL. Exactly, sir.

The CHAIRMAN. What distinctive new feature is there abou dock which is not possessed by the old wooden, floating dock?

Mr. DASHIELL. The principal distinctive feature is a longit stiffness of the whole structure, which is given by having a mir number of pontoons supported along the edges by high, vertica walls, which act as longitudinal girders, so that the floor of the with a very heavy ship in the middle of it, would still be a st line, on account of the strength of the side walls.

Senator TILLMAN. The side walls are continuous?

Mr. DASHIELL. Yes, sir.

Senator TILLMAN. They are solid?

Mr. DASHIELL. They are continuous girders of enormous siz strength.

The CHAIRMAN. It is a simple appliance in mechanics, is it no

Mr. DASHIELL. It is very simple indeed. There is nothing c cated about it in any way. That is the general shape of the dock trating].

The CHAIRMAN. What do you think of the feasibility of such a dock near the mouth of the Mississippi River?

Mr. DASHIELL. I think that is the only kind of a dock to be used there. The difference between high and low river is, I understand, 18 to 20 feet, and in that case it would be out of the question to build there a graving dock of any kind I know of without an enormous expense, whereas this dock can be constructed very cheaply. There is plenty of water off Algiers at a very short distance from the shore.

Senator CHANDLER. At New Orleans?

Mr. DASHIELL. Right across from New Orleans. This dock can be anchored off shore in deep water, and then when the ship is lifted on it, it could be warped alongside the wharf for ready access. I should imagine from what I can see from charts and soundings that the dock would have to move laterally not over 200 feet, which is entirely practicable.

The CHAIRMAN. What do you think as to the practicability and desirability of substituting a dock of this kind, whether built by the Government or otherwise, at any of the other points which the board selected for new, permanent graving docks?

Mr. DASHIELL. At Boston I think this would be the best kind of dock. At Portsmouth, N. H., although the board did not recommend a dock there, this dock is entirely practicable, for there is depth enough of water right off the navy-yard to moor one of these docks. At New York there is plenty of water for just such a dock. At Philadelphia I do not believe in having a dock at all beyond what they have there now, on account of the expense of dredging. There is no use in putting a dock here to take a ship drawing 30 feet, when it is with the utmost difficulty they make the passage up and down the river with a vessel drawing 26½ feet. I have made that trip four times, and it was all the vessel could do to get up and down without any injury. It is only necessary to look at the records of the *Columbia* and the *Brooklyn* in going down the river to see what danger there is in bringing a ship up, even when in good condition.

Senator CHANDLER. Do you mean the whole length of the Delaware?

Mr. DASHIELL. Not the whole length, for there are reaches where there are 30 and 32 feet of water. There are a great many shoals over which there are only 27 feet and even less than that, because there are lumps on the bottom which the lead line would not discover. In going up and down the river we took but one pilot, said to be the best, and we had to drift over the lumps with the utmost care; and we could even sometimes feel the ship touch now and then.

Senator CHANDLER. What is the expectation of the army engineers about the ultimate depth of water to the ocean?

Mr. DASHIELL. I understood that they hope for a channel of 30 feet, but it will take a long time to get such a channel.

Senator CHANDLER. They do not expect any more than that?

Mr. DASHIELL. I think not.

The CHAIRMAN. That is, in the future?

Mr. DASHIELL. Yes, sir; and at an enormous expense. Then going south, the mouth of the Mississippi is a place that is already ready for a dock.

Senator CHANDLER. What is the depth of water over the bar now at the Mississippi Delta?

Mr. DASHIELL. Twenty-eight feet in the Southwest Pass, and I understand by a new arrangement of jetties it can be made 30 feet

without any great difficulty. It is a depth which holds anyhow 28 feet.

Senator CHANDLER. Is there any danger that a dock of this kind in the Mississippi River at Algiers would be swept away irresistibly by a great freshet?

Mr. DASHIELL. No, sir; Algiers is in an eddy. In fact, the site of New Orleans, I believe, was determined by the existence of that eddy. The dock there would be in still water.

Senator CHANDLER. So you do not apprehend that the dock would ever be lost if put there?

Mr. DASHIELL. Not at all. There is no current where this dock would go.

The CHAIRMAN. At what other place do you think a dock of this kind would serve the purpose better than the graving dock?

Mr. DASHIELL. I think there should be a dock of this kind at Dry Tortugas in connection with the fortifications there.

The CHAIRMAN. There would be no difficulty in a dock there being maintained and being safe?

Mr. DASHIELL. No, sir; it would be perfectly safe. There is plenty of water there; there is good anchorage, and as long as you have a fortification there it is a fortified position. A dock is a requisite of an outpost like that especially at the present time. A dock like this at Dry Tortugas now, I should say, would be worth two battle ships.

Senator TILLMAN. How would you defend it?

Mr. DASHIELL. To defend it by the fort there and by a torpedo flotilla would be the best way.

Representative FISCHER. May I ask Mr. Dashiell to state if there is any feature in its portability, and also whether light and air are important features in dry docks?

The CHAIRMAN. You may answer as to that.

Mr. DASHIELL. The dock is a portable one, as shown by the voyage of one from Newcastle to Havana.

Representative FISCHER. It can be towed out of harm's way in case of an emergency?

Mr. DASHIELL. One of the chief advantages is that it can be towed out of harm's way. In the event, for instance, of Tortugas being shelled by a squadron outside, the dock could be taken in tow and in half an hour changed in location. Or it could be sunk and the enemy could shoot all day and never hurt it.

Senator TILLMAN. Provided you had depth of water enough.

Mr. DASHIELL. Yes, sir.

Senator TILLMAN. You would be obliged to have depth of water enough?

Mr. DASHIELL. If the dock is sunk down to 2 feet freeboard, the shot could pierce the upper part without damage.

The CHAIRMAN. It would not affect the structure?

Mr. DASHIELL. Not at all. As to light and air in that dock, it is particularly advantageous, because the bottom of the ship is lifted up clear of the water into the light and air. In that respect it is far ahead of any docks I know of. Yet I want to say that this feature of light and air in a dry dock, as far as I know, does not count for much, for I have seen the *Brooklyn* docked under most disadvantageous circumstances in the League Island dock, where there was not any light and but little air. The dock floor was all boarded over to keep the snow out, and there were only about 3 feet between the keel and the bottom, so that one had to crawl upon one's hands and knees. If there ever was a lack of light and air it was there. So, though it is a good

ing to have both, it is not an absolutely essential thing. But, at all ents, the dock is very accessible, and it brings a ship, I think, to the eoretically ideal condition; that is, it brings it up alongside the workop doors, and you do not have to go down into the dock to get at the ttom of a ship.

The CHAIRMAN. What is the fact as to the practicability of transrting a dock of this kind from one port on the coast to another? ow much of that could be done if needed?

Mr. DASHIELL. There would be no difficulty whatever in moving this ck from one place to another. For instance, to give an example, supse we had a dock like this at Portsmouth, N. H., and war was being rried on farther south, and we did not want to send a vessel that far rth, this dock could be gotten under way at Portsmouth, N. H., and wed down and put inside the Kill von Kull, for instance, at New York, or could be towed farther south and put off Newport News, where there 60 feet of water. There is no trouble about that. It ought to tow 6 ots an hour—150 miles a day.

The CHAIRMAN. State to the committee if you know of any instance here a floating steel dock, or a dock with the general features of a ating steel dock, has been taken from one place to another, or of its es abroad to the present time by other naval powers. What does ur investigation show has been established about floating steel docks?

Mr. DASHIELL. The largest ship I know of as having been actually fted by a floating steel dock is the *Inflexible* in the English navy, of ,000 tons displacement. Floating wooden docks very much weaker an that have lifted ships of 7,000 tons in Italy and Austria. The avana dock, I see by the papers, has just successfully lifted a 5,000-n cruiser.

The CHAIRMAN. That is a dock of this model?

Mr. DASHIELL. Yes, sir; it is exactly like this model, only this dock, u will observe, has three pontoons, which is very much better than e Havana dock, which has five pontoons. All that is wanted is an ld number of pontoons, so that these two outside ones can dock the iddle one or the middle one can dock the two outside ones.

Senator CHANDLER. You want at least three?

Mr. DASHIELL. Yes, sir; we want at least three.

Mr. CLARK. I can show exactly how that is done by the model here.

The CHAIRMAN. Mr. Dashiell will first go on and state what he has nown about anything in addition to what he has already stated in gard to the practical trials and demonstration of floating steel docks. ou say the *Inflexible*, which is a ship of 11,000 tons, was docked in a eel floating dock?

Mr. DASHIELL. Yes, sir.

The CHAIRMAN. Where was that ship docked?

Mr. DASHIELL. I do not know where the *Inflexible* was docked. erhaps Mr. Clark can state where.

Mr. CLARK. At Bermuda.

Mr. DASHIELL. The *Inflexible* was docked at Bermuda. I did not ow whether it was docked after the dock arrived at Bermuda or fore it left England.

The CHAIRMAN. That was not a Clark & Stanfield?

Mr. DASHIELL. It was not a Clark & Stanfield. It was simply as if at dock were solid and lifted by the displacement of this portion lustrating].

The CHAIRMAN. Do you know how many floating steel docks gland has?

Mr. DASHIELL. As far as I know, the English Government does not

possess any floating steel docks. I asked Sir William White, the chief constructor of the English Admiralty, particularly on that point, and I also asked for my own information his views as the greatest naval constructor in the world on floating steel docks. He knows more about ships and about docking than anybody else I know or ever heard of. He told me the English Government contemplated getting a steel dock of this very type—the Clark & Stanfield type—at as early a date as practicable, because it was the most efficient tool he knew of in the dock line on account of its flexibility, its portability, and its general uses; that he had studied the dock's principle and had made up his mind that it was an entirely practicable and efficient dock. I could not get more out of him than that, and it confirmed me in the views I had already formed of the dock.

Now, in regard to the several criticisms I have heard of this dock. Of course I went into those very carefully, because I had to be the exponent of this dock before the board. In looking into the matter the main criticism against it was that the ends would curve up and there would not be sufficient rigidity to take the weight of the ship with so many pontoons. The distance from here to here [indicating] in the proposed dock is about 200 feet. That is one big pontoon, which is stiffer than the stiffest ship. So there is no question of deforming one pontoon. On any of our battle ships the distance between the two principal weights in the structure of the ship—that is, the forward and after turret—is about 205 feet. You can easily see that all the weights in the ship which are included between those two points—for the bow and stern count for nothing really—are all supported on that one pontoon. In addition, we have the extensions of this pontoon made stiff and rigid by these two sides, so that there is no question whatever in regard to the efficiency of the dock and its longitudinal stiffness so far as our ships are concerned.

Then, again, one of these new steel ships is not such a delicate thing after all. Locally she may be weak, on account of the thinness of the plates, but the ship as a whole is structurally very strong. She is the best kind of a girder we can design. When you consider that when plunging into a head sea she can throw her whole bow 30 or 40 feet out of the water, absolutely unsupported, and come down while the other end goes up again, she is not such a weak and delicate thing, taken as a whole, as some would have us believe.

The CHAIRMAN. From your knowledge of this dock, how long would it take to build such a dock in one of our private yards in this country if the Department contracted to build it?

Mr. DASHIELL. It would depend a great deal on the yard. Our yards are not very well equipped. I do not know about the western coast, however.

The CHAIRMAN. I do not mean the navy-yards, but private establishments.

Mr. DASHIELL. No, sir; I speak of private yards. It would take from nine to ten months in the best of them, the greatest delay being in getting the machinery necessary to rapidly punch those plates. We have not what are called the multiple punches necessary.

Senator HANNA. Have we not at Newport News?

Mr. DASHIELL. Yes; there are tools running 4 to 6 punches at a time. I am speaking of 24 to 30 punches at once—the tool needed.

The CHAIRMAN. Where was the dock now in the harbor of Havana constructed?

Mr. DASHIELL. It was constructed by Swan & Hunter, of Wallsend-on-Tyne, near Newcastle.

The CHAIRMAN. That is a private yard?

Mr. DASHIELL. It is a private yard very well equipped. Of course t does not take a great plant for this, but it does take a big machine, which, being once in position, the dock builder can rush the erection f docks at a great rate; say one every five months without any trouble. 'he thing is to get the machine to start with.

Senator TILLMAN. Do you mean that it would take five months 'orking ten hours a day?

Mr. DASHIELL. Yes. The delay with us would be in procuring the achine tools needed—the multiple punch.

Senator TILLMAN. Such a tool would be like a bit and auger in comarison with the expense of other things?

Mr. DASHIELL. It would be a pretty big affair—about as long as this om, I imagine.

The CHAIRMAN. I am obliged to go to the Committee on Appropriaons. I shall have the benefit of this hearing, as it is being taken wn.

Senator PERKINS (acting chairman). I wish to make a statement of fact which has come under my notice and which I think is corroboative of the statement of Captain Dashiell, that it is impracticable to nstruct a graving dock at Algiers. Mr. Henry Villard, president of e Northern Pacific, some ten years since, when that road was comleted, determined to build a dry dock upon the Willamette River at ast Portland, and after consulting with many engineers he decided pon a graving or a basin dock. They expended nearly half a million ollars and have abandoned it, and the money expended has been a ss. The failure was caused principally by the high rise of the Willaette River, but the conditions are similar there to those which preail at Algiers, opposite New Orleans. I am quite familiar with both f the localities. For that reason I have opposed our friend General iles for the past four years in Congress in seeking an appropriation r building a basin dry dock at Algiers. I only state this as a fact hich corroborates the statement of Captain Dashiell on this subject. re there any other questions that members of the committee desire to sk Captain Dashiell?

Senator BUTLER. I should like to ask what is the limit of high and w water beyond which it is impracticable to build successfully a dry ock?

Mr. DASHIELL. We have high and low water at Boston, which is bout 9 feet 6 inches. The dock works all right there, but at low tide nd during half tides the depth over the sill is so very small that hardly ny ship could get in at that time. Then, again, in the Mississippi, the hore being very low, the navy-yard itself would be all afloat at high ater over the levee or around over the caisson of the dock. That ould make a graving dock impracticable there.

Senator TILLMAN. If a graving dock would be impracticable by reaon of high water, would not any kind of a dock be useless in case of igh water, because the means of getting from the tools, the machine hop, to the vessel on the dock would be destroyed?

Mr. DASHIELL. You could have that behind the levee.

Senator TILLMAN. Could you not levee the machine shop anywhere?

Mr. DASHIELL. I suppose you could, but the caisson of the dock is n the ground, and you have got to have it impractically high or else he water will get over that and in behind your levee.

Senator TILLMAN. Governor McEnery, what is the rise up and down he Mississippi at flood at New Orleans?

Senator MCENERY. Hardly any; none at all perceptibly.

Senator TILLMAN. There is no tide, I know. I am talking about the high river. What is the fall of the river, up and down, in a freshet?

Senator MCENERY. It is from 16 to 18 feet from low water to high water.

Senator HANNA. Senator Tillman means when there are high floods—freshets.

Senator MCENERY. The height of the river, I suppose, between the ordinary banks and the overflow would be some 20 feet.

Mr. KING. May I introduce a thought here? I have not been at Algiers, but I have discussed this matter of a dock with parties down there in the capacity of consulting engineer. I was informed that while this tremendous rise and fall of water does take place at Algiers, a few miles down the delta, on account of the formation of the land there and the spreading out of the water, the rise is very much reduced, so that a graving dock which would be quite impracticable at Algiers would possibly be an entirely practicable thing 75 or 80 miles down the river.

Senator PERKINS. Below English Bend?

Mr. KING. The particular place my attention was called to was Venice, or New Venice. I have not any personal knowledge of the locality at all.

Senator TILLMAN. Is not that point below all the fortifications as well as away from railroad communication?

Mr. KING. I am not able to tell you about that.

Mr. DASHIELL. We would not have a dock down there as a gift.

Senator TILLMAN. It would be of no use?

Mr. DASHIELL. No, sir; we would not own it.

Senator TILLMAN. Are you familiar with the dry dock at Port Royal?

Mr. DASHIELL. Only through drawings, sir; and a general study of the whole place. I have never seen it, but I think I am pretty familiar with everything in connection with it.

Senator TILLMAN. Is not that the largest dock we have now on the Atlantic coast?

Mr. DASHIELL. Yes, sir.

Senator TILLMAN. Is it not the deepest dock?

Mr. DASHIELL. Yes, sir.

Senator TILLMAN. I mean the one that will take ships having the most draft?

Mr. DASHIELL. Yes, sir.

Senator TILLMAN. What is the matter with it?

Mr. DASHIELL. The matter with it, generally speaking, is that there is a narrow channel that leads up to it, and ship captains do not like to take vessels up there because they have got to moor the ship—that is they have got to put one anchor out here [indicating] and one astern. The ship in swinging is bound to foul one or the other.

Senator TILLMAN. Is the channel any narrower than the Delaware going up to League Island?

Mr. DASHIELL. No, sir.

Senator TILLMAN. Is it half as dangerous?

Mr. DASHIELL. No; but there you have water enough to swing around over the anchor. You can swing to a single anchor there. I suppose you are speaking of the difficulty of docking a ship there?

Senator TILLMAN. Yes. I want to know what the matter is; if it is anything except the fact that the ship captains do not like to go there that there is no society and nothing to entertain them.

nator CHANDLER. That is not proved. Why do you assume it?
nator TILLMAN. I say I want to know if that is not the reason. I
ot assert it.
. DASHIELL. I do not think the lack of the social feature there
any figure with the docking of a ship, but there is difficulty in get-
a ship up there.
nator TILLMAN. Just to be frank, if you were in command of a ves-
f here that needed docking, you would much rather carry her to
York or Boston or Portsmouth, or to Hampton Roads, or almost
here than down to South Carolina?
. DASHIELL. I have never been to South Carolina, and I can
ay.
nator CHANDLER. I do not think the Senator from South Carolina
t to introduce the social question here.
nator TILLMAN. I want to know whether there is any inherent
t in the Port Royal dock which prevents a vessel from going there
docked, if necessary.
nator CHANDLER. That is a perfectly legitimate question.
. DASHIELL. There is a defect which can be remedied by the
nditure of very little money.
nator TILLMAN. How much money?
. DASHIELL. I should say about $10,000. There is the channel
ating] and the ship has got to swing as I said. Put a few piles
wharf along there [indicating] and let the ship come up and tie to
piles or the wharf, and you have got it all right; and when ready
n go into dock. But there is nothing for the ship to tie to and a
ooking out for the safety of his vessel has to anchor down here
ating] and swing around.
ator TILLMAN. Then you express the belief as an expert that
10,000 we can make the Port Royal dock available?
DASHIELL. I do, sir; and I say it is the most valuable dock we
n the country at this moment.
ator TILLMAN. And yet our Navy Department subjects the coun-
the mortification of having to go to Halifax to dock a vessel
than spend $10,000?
ator CHANDLER. That is argument. I object to that.
ator TILLMAN. I am putting it in the form of a question.
ator CHANDLER. The witness is not here to answer a question
the Navy Department subjecting the country to humiliation.
g as the Senator confines himself to physical facts he proceeds
r.
tor PERKINS. I think the point made by the Senator from New
hire is correct. That is a matter for Executive consideration.
tor TILLMAN. The point with me is to bring out the fact that in
inion of one of the experts of the Navy Department the Port
lry dock is capable of being made available, so as to receive any
we have got, by an expenditure of $10,000.
tor CHANDLER. Now leave it right there.
tor TILLMAN. I am willing to leave it there.
tor BUTLER. Let us get that in evidence if it is the case. Will
dock at Port Royal, with an expenditure of $10,000, take any
p we have?
DASHIELL. It will take any but the *Massachusetts*. Her bilge
would just touch on the altars as she touched on the blocks.
it having been there and actually measured the dock, but hav-
asured plans which I believe are to scale, it is my belief that

about a week's work in chopping off those altars would let that s just slip in.

Senator PERKINS. How large are her bilge keels?

Mr. DASHIELL. About 18 inches.

Senator PERKINS. And extending about two-thirds the lengt the ship?

Mr. DASHIELL. About half the length.

Senator TILLMAN. Are you familiar with the condition of the mac shops there—that is, the tools with which to repair and handle ves

Mr. DASHIELL. I am fairly familiar with that matter; we are ins ing machinery of very good quality as fast as we can.

Senator TILLMAN. I know we had an appropriation in the last n appropriation act of $60,000 or $75,000 for beginning the equip there.

Mr. DASHIELL. Yes, sir.

Senator TILLMAN. What would you consider a reasonable amou expend on equipment at that dock, in the condition the Navy is in with war threatening?

Mr. DASHIELL. Fifty thousand dollars would put it in very shape.

Senator TILLMAN. So that we could handle and repair quickly vessel that would go in there?

Mr. DASHIELL. Exactly.

Senator TILLMAN. Fifty thousand dollars additional would required?

Mr. DASHIELL. Exactly; and I should like to emphasize that the most important dock that we have at this moment.

Senator BUTLER. You say a week's cutting down there would b that is required?

Mr. DASHIELL. Yes, sir.

Senator TILLMAN. All that is required, he says, to let any vesse

Senator BUTLER. Fifty thousand dollars would cover the $10 for the slight repairing and cutting down and the cost of furnis appliances and tools?

Mr. DASHIELL Yes, sir.

Senator CHANDLER. Explain a little more minutely how much bilge keel widens the *Massachusetts?*

Mr. DASHIELL. The bilge keel widens the *Massachusetts* just at point where the bilge turns up measured out laterally until you the edge of the fin which sticks out. I should say it would wide from about 18 inches to two feet.

Senator CHANDLER. On each side?

Mr. DASHIELL. Yes, sir.

Senator PERKINS. Thirty-six inches.

Mr. DASHIELL. In studying that very question I had a drawing of the *Massachusetts* and the dock, too, and I placed one on top of other and found that it was a matter of a few inches, according to drawing, to get one of those ships in there.

Senator CHANDLER. It is a timber dock?

Mr. DASHIELL. Yes, sir.

Senator CHANDLER. And cutting those down [indicating], you t even the *Massachusetts* could go in?

Mr. DASHIELL. Yes, sir.

Senator HANNA. Is she the only one?

Mr. DASHIELL. She is about the largest we have except the *I* The *Iowa* has no bilge keels.

Senator CHANDLER. Do you understand that the Department adopted ilge keels for vessels in order to save draft of water?

Mr. DASHIELL. No, sir; we have adopted bilge keels on ships of the *ndiana* class only in order to check the violent rolling. The battle ip has to have so much armor on her up above that she has got to be ade very stable in order to be safe, and that makes her a violent roller.

Senator CHANDLER. The bilge keels prevent that?

Mr. DASHIELL. The small fins wave through the water and check it.

Senator CHANDLER. They do change the draft of the ship?

Mr. DASHIELL. No, sir; they do not change the draft of the ship.

Senator TILLMAN. They are like paddles put out to steady it?

Mr. DASHIELL. Yes, sir.

Mr. DASHIELL. I should like to say just one thing in connection ith something that Admiral Matthews said in regard to building these ocks for posterity. I looked into that very question in the Portsouth, England, dockyard, where there is a most interesting assemlage of docks. There are docks of granite there built over one undred years ago to dock the *Victory*, Nelson's ship, and other ships. hose docks were built to dock the most magnificent structures of that eriod, and they were looked on at that time as being everything that ossibly could be needed for the work. Now they are entirely out of ate; they are of no use whatever, except to take little torpedo boats of a ngth that can go in the dock. If we built a dock, say 750 feet long, f stone and concrete, or anything else, a permanent structure on shore, hundred years from now that dock would probably be of little account. o far as I know, this [floating dock] is the only dock which will last o posterity, because the ends are open.

Senator TILLMAN. It leaves room to build it just as long as safety nd experience will show the ship is capable of being built?

Mr. DASHIELL. Yes; and my view and study of the thing is that there s no use in investing now such enormous sums as a dock of stone, conrete, or any other dock on shore will require, if in their place you can et a dock of this kind for about one-fourth of the money and certainly n one-half less time.

Senator BUTLER. We have a number of dry docks now that are useess—out of date?

Mr. DASHIELL. Yes, sir.

Senator BUTLER. What are the defects in those that are useless ow?

Mr. DASHIELL. The defects principally are in length.

Senator BUTLER. They are not long enough?

Mr. DASHIELL. They are not long enough nor big enough.

Senator BUTLER. They are not long enough to take the war ships we ow have?

Mr. DASHIELL. No, sir; they will not take the war ships we have on ccount of their length. The depth over the sill is so little that only a ew ships could get in there, even if they were long enough to take them. hese stone docks are now altogether too small, although at the time hey were built their size was thought to be ample for any future evelopment.

Senator BUTLER. If at this time we were to build a permanent dry ock of stone or concrete, what would be the possible estimate for the uture, in twenty-five or fifty years, as to the size of war vessels?

Mr. DASHIELL. That is very hard to guess. We can only look at ast history and say that the ships will be longer; how much longer we o not know.

Senator TILLMAN. But they can not get much deeper, because that would necessitate the deepening of all the harbors in the world.

Mr. DASHIELL. If you will look at history, you will find that ships have not increased in draft so much. They have increased in length.

Senator BUTLER. The only thing that could happen in the future to make dry docks built now worthless would be that they would not be long enough?

Mr. DASHIELL. Yes, sir; probably.

Senator BUTLER. Is there not practically a limit to the length of the war ship that we now have?

Mr. DASHIELL. I can only give an example. When this board of ours met the longest ship was about 650 feet, and we thought 700 feet would certainly cover anything. Before the board closed we heard of a ship of 749 feet.

Senator HANNA. A war ship?

Mr. DASHIELL. No, sir; but one that could be made a war ship.

Senator BUTLER. Do you think it possible that there will ever be a war ship over a thousand feet long?

Mr. DASHIELL. I do not think so.

Senator PERKINS. Has not the beam increased proportionately?

Mr. DASHIELL. No, sir. It has increased to some extent, but not measurably with the length.

Senator TILLMAN. Do you happen to know the length of the *Victory*, Nelson's famous vessel?

Mr. DASHIELL. I think it was about 140 or 150 feet long.

Senator TILLMAN. If we have advanced that far in eighty years, we had better give them some leeway to turn around in.

Mr. DASHIELL. But the longer you make the dock the more you increase the outlay, the expense, and everything. It is a very expensive change you are making when you increase the length of the dock.

Senator TILLMAN. But I am speaking not of the dock but of vessels. We shall have to give the naval architects all the room they want as experience will lead them forward.

Mr. DASHIELL. Yes, sir; ships come first, and appliances are built to suit them.

ADDITIONAL STATEMENT OF LYONEL CLARK.

Mr. CLARK. I made some efforts at the last meeting held here to explain by means of books the theory of this dock, but I thought that the committee would like to thoroughly understand it, and so I have had made a rough model to show the general idea. The point which has been most attacked in the dock is that of rigidity. This is a point which we claim. We claim that the dock has been specially designed to have a large amount of rigidity.

There are two types of vessels in any navy which we have to deal with, that is, the long cruiser and the short ironclad. I will imagine here that we have a cruiser of our *Diadem* class, about 450 feet long and displacing 10,000 tons. If I have it placed on a dock such as the model shows here, which is practically the same length and has the same lifting power, it must be evident that there can be no straining, no tendency of the ends to turn up and strain the ends of the vessel, because the length of the vessel and the length of the dock are practically the same. Now, however, when I place on the dock a short ironclad, what we call our third-class ironclads, of about 10,000 tons and 300 feet long, the weight is the same. Therefore I must utilize the whole lifting power of my dock to support this vessel.

This portion of the dock [indicating] undoubtedly tends to curl up and strain the ends of the vessel. As a matter of fact, owing to the very powerful form of construction which we have specially adopted for these docks, making the sides or walls the full depth, they are capable of affording a great resistance. The thing becomes, practically speaking, a bridge, an ordinary girder bridge, supported here [indicating], this portion merely being the bridge which carries the rails. Imagine the ironclad, if you like, the train on the middle of the bridge.

In the Havana dock it was a condition of the contract that the dock should be strong enough in its sides to allow a vessel of 10,000 tons to bear on about 300 feet of the length. That has been done in the Havana dock. But at the same time we wished to do away with such strains, because they demand heavier sides than would otherwise be required; and however strong these sides are made, there is still a certain amount of effort put on the top. The way we do that is this: We saw that the cruiser bearing over the whole length of the dock, the weight of the cruiser and the lifting power of the dock were equal and opposite, and therefore there were no strains. What we do, therefore, is, the dock being built in very many compartments, we simply pump out that portion of the dock which lies under the vessel. It is therefore evident, as we pump only that portion of the dock that lies directly under the vessel, that there can be no end straining of the vessel whatever, because her weight and lifting power then are equal.

But the dock will not lift the vessel, because I have taken off a certain amount of lifting power, and instead of having a displacement of 10,000 tons I have probably 8,000 or 8,500; but we have never lifted a ship, as a matter of fact, to such an extent that we can bring these alters, as we term them here [indicating], out of water. There remain, then, four or five feet of dock in the water. At that time we place in position in the alters these gates. Practically they are allowed to float above it, and as the dock gradually rises they drop into their own slots of their own accord without any balances whatever. We, therefore, have got this [indicating] lifted in such a state of water, below the level of the gates and below the level of the alters, and the lifting power of the dock is directly under the ship. We then pump this interior of the dock, removing the water, and the ship can be got at. There can be no possible straining of the ship because the lifting power is entirely confined to within these gates and the gates are put up close to the bows of the vessel. The gates can be put wherever you like. Your lifting power and weight are equal and there can never be the slightest strain on the vessel. That is the principle, and that is why we call this the floating graving dock. It contains the characteristics of the two types.

Senator TILLMAN. I am not much of a mechanic, but it appears to me that if you have left water in the end compartments to keep from straining the vessel, instead of pumping out and having air there, which would give it a lift when you pumped out the water inside of the ends, your dock would sink. It seems to me that it is obliged to sink, because you put the weight on it by pumping the water above.

Mr. CLARK. But the water is pumped out and thrown into the sea.

Senator TILLMAN. I know, but that water had weight, and when you remove it and put the air there, the air pressure will carry the whole structure down. I do not know how far it will carry it, but it will certainly lower it.

Mr. CLARK. It will not do anything of the sort. It makes no earthly difference. I place these gates there [indicating]. That dock remains just the same; it will not go up or go down. I simply remove the

water from there [indicating]. I do not put any weight on the dock. I take the weight off, as a matter of fact.

Senator TILLMAN. I knew there would be a change in the level whenever you took the water out.

Mr. CLARK. Now comes another point, and that is the self-docking of the dock, because a floating dock is absolutely useless if you can not have every portion of its body so that you can clean and repair it. This is done in a very simple form. There are three pontoons [indicating]. There are attached to these sides steel pins. When we wish to dock one of these pontoons the dock is allowed to float light. A little water is left in this portion [indicating] so that each part of the dock carries its own weight and only its own weight. At that time, therefore, it is a very easy matter to remove these pins, because this is floating on the same level as the rest of the dock, and there is no tendency to rise or fall, or to do anything. When the pins are removed the pontoon is free. We then allow all the rest of the dock to sink gradually under the water. You will imagine now that this dock is sinking [illustrating]; and while it is sinking, of course, this remains floating on the face of the water until it gets to that height [indicating]. When it gets to that height we replace the pins in position again, and the dock itself then is pumped up, and it lifts up the pontoon perfectly clear of the water, and boats then at water level can go under her and scrape and paint and do everything. The two end pontoons are lifted in one operation by means of a big central pontoon, and then the big central pontoon is lifted, in an alternate operation, by the two end ones. When finished the dock is lowered again.

Senator BUTLER. What is the purpose of raising it that way?

Mr. CLARK. To clean the dock itself. The dock then is slowly raised. It sinks until it comes back to its normal position, when the pins again are inserted and the dock is ready to go on and perform its ordinary work. We very freely admit that in this dock we have taken ideas wherever we could, but those ideas are really principles. There is a distinct novelty in these docks. There is novelty in the shape of the pontoons, in the way in which they are built, and there is novelty in the use of gates in conjunction with separate pontoons on a self docking dock. We are perfectly willing to make our acknowledgments to all those persons to whom we are indebted, but at the same time we do wish to have a little credit ourselves that we have done something new in forming this dock.

Senator TILLMAN. You simply assembled the old principles and applied them to new uses?

Mr. CLARK. We have assembled and made an absolutely new combination. The use of pontoons between the walls is an absolutely new invention. It had never been done before. All other docks always had pontoons placed under the walls. This is an entirely new arrangement, placing them between.

Mr. KING. I wish to ask Mr. Clark about the size those pins have to be in order to preserve rigidity.

Mr. CLARK. It is about a 2-inch steel pin. The resistance of strength of joint will vary very much. If the dock has to go to sea, as the Havana dock, the joint has to be very strong indeed. If it is for use in a quiet harbor, it requires a very small joint, as the effort is very little between the pontoons and walls.

Mr. KING. Further, let me ask you how the cost of that dock compares with the cost of a concrete dock of the same capacity?

Mr. CLARK. It would be considerably less than one-half. The Stettin

; building in England, which would dock any vessel in the :ates Navy, including her cruisers and the *St. Paul*, costs, in Stettin, including everything, £91,000. That is under ion dollars. That includes towage across the North German l insurance.

HANNA. Are there any other floating steel docks in use?

ARK. There are hundreds. We alone have built over eight ollars' worth of steel docks. But not docks of this type. nly one other of this type. This type is the latest adoption floating dock to ironclads and cruisers combined. It was uired until late years. When the Navy started building the iclads and long cruisers of the same weight, and the ordinary docks were no longer in use, we had to bring in and evolute :ular form. It is a dock not two years old, and already two ordered, which is not a bad record for an invention less than old.

TG. Is the Stettin dock of that type?

ARK. It is absolutely of that type.

TG. Of what lifting capacity?

ARK. She has 13,000 tons for short ironclads, and 12,000 ng cruisers. That dock is being built in six months. I may hat on the part of the builders I took an offer which was laid '. Roosevelt to build a dock suitable for any vessel in the Navy and set it afloat in England in six months under a very alty. Probably it would be completed in five and one-half The penalty would commence after six months—a premium alty.

CHANDLER. You believe that it would safely come across the

ARK. The Havana dock, which is very much the same dock, ght across.

TILLMAN. Why not deliver it on this side?

ARK. They would be perfectly willing to do that, only of course le would come in of war risks.

CHANDLER. You mention that only as bearing on the ques- ce? You named the price?

ARK. We made the offer and named the price for delivering ere. Evidently in this troublous time it would be a very ing to bring her across.

PERKINS. What is the weight of the dock?

ARK. The weight of the Stettin dock includes 4,000 tons of iout machine and fittings.

CHANDLER. I should like to ask whether there can be trans- ng with or on any of these docks any considerable number r use.

ARK. Our own idea is that the dock itself should be attached avy, and in connection with it there should be built a power- ich would tow the dock, and which dock would be fitted with workshops, heavy cranes, a large electric plant, and a good ols, so that wherever you place your dock, if you set it down as or wherever you go——

CHANDLER. You would have a floating workshop go along?

ARK. A floating workshop. The crane would swing around, ave got a propeller. You could put it where you liked.

CHANDLER. It would be both a tender and machine shop?

ARK. Both a tender and machine shop, a complete electric

drill, excellent tools, new plate. You could put forty drills on your boat for new plate in a few hours.

Senator TILLMAN. It would serve the same use as a wrecking train on a railroad, except that it could go anywhere, because it would have the whole ocean before it?

Mr. CLARK. It would have the whole ocean before it and could go anywhere, the ship and dock together. That is what we call the idea of a hospital dock, a hospital for ships.

Senator CHANDLER. I think the committee are under obligations to Mr. Clark for the pains he has taken to show us the dock.

Senator PERKINS. You have the thanks of the committee, Mr. Clark.

STATEMENT OF HON. L. E. PAYSON.

Mr. PAYSON. Mr. Chairman and Senators, I have no expert knowledge upon this question and I do not appear before you as an expert. I appear before you as the attorney for the Newport News Ship Building and Dry Dock Company. I was present day before yesterday at Newport News, at the launching of the *Kearsarge* and *Kentucky*, and Mr. Orcutt, the president of the company, brought me a telegram coming from a friend in Washington in which the statement was made, in substance, that this hearing was progressing before the committee; that the statement was being circulated, and had been made before the committee, that the proposed building of a dry dock which is in contemplation at Newport News was not being carried out; that the statement that it was to be built was not made in good faith, and that there was doubt in the minds of a great many people who were interested in this hearing as to whether or not the progress being made upon that dock was in good faith in process of its construction. I come to put before the committee in an authoritative form the facts in relation to it.

The Newport News Ship Building and Dry Dock Company has practically completed its plans for the construction of a dry dock which will be a timber dock 1,150 feet in length, 90 feet in width of the bottom, to accommodate amply a ship with a breadth of beam of at least 96 feet, this to be divided by a gate into two compartments to be used singly or doubly as the necessities of the case may warrant, having a depth of 30 feet of water over the sill at mean low tide, and located at the most appropriate place in the yard for a dock of that character. It is immediately upon the water front. Some gentlemen of the Naval Committee may, perhaps, be familiar with the ground there. It is between the present dry dock and the big slip over to the left as you approach it.

In connection with that there will be additions made to the shops convenient to the new dock. A new lifting crane or derrick is substantially completed. Two weeks more will finish its construction, and this derrick when ready for operation will have a lifting capacity of 150 tons. A better one is not to be found in the world. It is practically completed to-day. Two weeks more will witness its completion and erection upon its tower.

Of course the members of the committee are as thoroughly familiar as I am or perhaps better with the situation of Newport News and its advantages for this sort of work, when extensive repairs upon the large vessels of the Navy are needed. The harbor is one that is unexcelled in the Union. It is accessible at all times. It is one that the Government has had practically during its lifetime, and upon which there has

never been the necessity of the expenditure of a dollar. There is no place utilized along the water front of that yard, which runs now something like 3,600 feet, something over half a mile, where they have less than 6½ fathoms of water, generally 42 to 50 feet. The soil in which the dry dock is to be built is hard and indurated clay. There can be no better soil in the world for it, so the engineers say.

I want to put before this committee, in as strong terms as can be put and as briefly as it ought to be put, the fact that the construction of that dock is as certain as that the Newport News Ship Building and Dry Dock Company will continue to exist for one year. The excavations will begin probably in the next ten days upon that dock. I had a blue print of the first plan. It was, however, only 960 feet.

I might perhaps interrupt myself here by saying that the first plan which was adopted by the officers of the company contemplated a dock of 960 feet. It was thought, however, in view of the necessities of the future, that perhaps that might be too short. Then plans were prepared showing a structure of 1,050 feet. Mr. Huntington reviewed that, and in conference with Mr. Orcutt and the superintendent, Mr. Smith, and particularly in view of the increasing needs of the merchant marine as to the increasing length of vessels, as well as the breadth of beam—for it is already contemplated, as was stated to me the other day, that vessels will very soon be increasing in construction of breadth of beam to 85 and possibly 90 feet—it was thought that perhaps it would be better, looking to the future, and in that spirit of progress which has always characterized the management of those works, that 90 feet in width would not be too much at the bottom, and that it ought to be increased in length to 1,140 feet. And those are the plans which have been adopted.

I had in my office blue prints of the first plans, 960 feet, and also of the enormous derrick and crane which have been erected, but Mr. Cannon, who is chairman of the Committee on Appropriations of the House, in conversation with me in reference to this subject, asked me if I would kindly loan them to him for the purpose of a speech which he will probably make in the House of Representatives to day, and he has them. They would not shed light upon what I am saying here, except perhaps as matter of curiosity. As to the location of the ground and all that sort of thing, it is not material, although you would be interested in it.

But this is what I desire to say to the committee. I am authorized by the officers of that company to say to you, as representatives of the Government, that we are not asking a dollar from the Government in one way or the other. We will make a dry dock there that will be second to none in the world, and we will make it in the best shape and form for practical use. It is in the midst of a shipyard that is second to none in this country, and I am told by people who have been abroad that its facilities for building ships and making extensive repairs are not excelled anywhere. The shops are filled with machinery of the very highest modern type, and everything conduces to economical and rapid work in the yard.

Senator CHANDLER. The hull and machinery of the *Kentucky* and *Kearsarge* were all built there?

Mr. PAYSON. They were all built there. The machinery and the works there were on exhibition perhaps to 20,000 people day before yesterday. Eve thing is done there that needs to be done about a ship. It is done on the ground. At any time the Government desires to give us the larger character of work in the way of repairing we are prepared to make a contract with the Government that it shall have a preference

in anything that comes to the yard that the Government desires to have done, and if such a tender shall be desired from us every contract we make with private individuals will contain a provision that it is subject to any requirement of the Government for the use of such portion of the yard as repairs for the Government shall necessitate. We are prepared to give a guaranty in any form that the legal officers of the Government may desire that any work for which we make a tender shall be done as cheaply as we would do the work for private parties, and we know, for a large percentage, probably 10 per cent at least, less than the Government could do the same work at its navy-yards, and more expeditiously than can be reasonably expected by anybody connected with the Government.

Senator PERKINS. Are you prepared to make a rate per ton for docking ships?

Mr. PAYSON. I am not prepared at this time, but if the committee or Congress desires that, the officers of the company will be here in twenty-four hours and will be prepared to make a specific tender with reference to any business.

Senator TILLMAN. As I understand you, the company you represent are going to build this dock anyway?

Mr. PAYSON. They are going to build the dock anyway.

Senator TILLMAN. For their own use and for the purpose of an investment?

Mr. PAYSON. Exactly. To do any character of work desired by any patron.

Senator TILLMAN. It is to be a dock to handle vessels of any kind, Government vessels as well as all others.

Mr. PAYSON. Yes, sir; to build and repair any kind of vessel; and we will give the Government a preference in an urgency contract whenever the Government may desire, and everything in any contract we may have with individuals shall be subject to the preferential contract with the Government; that is to say, if two American liners are in the dock and the Government wants the dock for a battle ship, those liners will go out. Our people are doing the repair work entirely of the American Line now.

Senator PERKINS. What length of time will be required to complete this dock?

Mr. PAYSON. It may be done within a year.

Senator BUTLER. You ask no bonus for giving the Government a preference?

Mr. PAYSON. No bonus whatever. All we desire is that the Secretary of the Navy be authorized to contract with us for the docking, overhauling, or repairs of any of the ships, upon reasonable rates, such as we give private parties—no more. There has been a question raised as to the power of the Secretary in that regard. We want that settled by law. We will be prepared to do the work.

Senator PERKINS. It seems to me, as we are considering various propositions, that it would be well for you to make a definite proposition of the terms on which you will dock ships for the Government.

Mr. PAYSON. Yes; that would not be an inappropriate thing. Of course that varies as to situation and so on, but that sort of a proposition could be made. But docking alone is hardly what the Government would want; that would be only a preliminary to work such as cleaning, painting, overhauling, and repairing generally. But if dockage alone was desired, we would tender a rate.

Senator CHANDLER. I had understood before Mr. Payson stated the

case so concisely and vigorously that the only desire was to let the Government know that this private enterprise is to go forward and a dock is to be built of the size indicated.

Mr. PAYSON. That is it, and I want to emphasize one point in connection with it, and that is the ability of the company to perform it; its ability as well as its responsibility to do anything it shall undertake.

Senator PERKINS. One company makes a proposition to us for 100 days' dockage for $90,000 per annum. It seems to me, in considering the advisability and expediency of the Government making an appropriation for the construction of docks, we should have a proposition from the company represented by yourself as well as from the companies represented by Mr. Dykman and others, in order that we may act intelligently.

Mr. PAYSON. I do not discuss the scientific question. We do not ask for a bonus from the Government for the use of that dock which we have built. It will be a better dock than any floating dock that can be built under any state of circumstances. We do not ask for a dollar of bonus. What we do insist is, it is not good business policy on the part of Congress to give a bonus to any corporation which is equivalent to a good big interest on its investment, as this pending proposition is, to give $90,000 for the bare right to use a dock for one hundred days out of three hundred and sixty-five. We will tender you the use of a better dock than that is, and furnish you all articles with it, the best shipbuilding plant there is in the world, without a dollar of cost, as an investment, and with no expense to the Government except the value of the actual work put upon your ships.

Senator TILLMAN. Mr. Chairman, this is my first experience in having anyone appear here who does not have some sinister or selfish motive; but I think you ought not to insist on your proposition, that these people must sink to the level of the other mercenary propositions, so to speak—they appear to be mercenary propositions—but just let us have the benefit of this exhibition of public spirit without any intimation from you that he ought to sink to their level.

Senator PERKINS. Judge Payson can state, if he feels disposed to do so, and do justice to his own company, that the rates charged to the Government shall not exceed those ordinarily charged to commercial companies.

Mr. PAYSON. I have said that and repeat it. The company will do that absolutely. That may be put of record. And more than that, Mr. Chairman. Just preceding the sending of Secretary Long's report to Congress this year, the proposals I make here were suggested to that officer, and I know met with great favor from him. Indeed, he said that he wished it was in his power so that he could give us an assurance in advance that we should have some Government work. But, of course, he could not do it. However, Mr. Orcutt, the president of the company, said to him, "We will not only do this work for you as cheaply as it would be done for anybody else, but in case of any disagreement as to what were reasonable charges for repairs, no matter whether great or minor, between the Newport News Shipbuilding Company and the Government, the matter should be left to the Bureau of Construction in the Navy Department; and whatever that Bureau says is right for work that is done, we will accept that and call the thing even."

Senator BUTLER. I understand we have a proposition before us for the use by the Government, for one hundred days in the year for $90,000, of a dock that is proposed to be built.

Senator PERKINS. We have another proposition for $115,000, and we

can have the use of it for three hundred and sixty-five days in the year.

Senator BUTLER. That is not the same company?

Senator PERKINS. No; it is another company.

Mr. DYKMAN. To use a graving dock, a still better proposition.

Senator BUTLER. To consider that proposition intelligently and to understand the relative merits between that and the service the Government could get from the company Judge Payson represents, is it not absolutely necessary to have the proposition before us if they see fit to make it? In other words, let the company understand that we shall be glad to have the same proposition, if they see fit to make it, that is, as to what they will furnish the Government one hundred days' service for in the dock that they propose to build.

Mr. PAYSON. No; I suggest, Senator, that that would be perhaps an impracticable sort of a proposition in this: If we would give you the use of that dock for any specific number of days, to use it for repairs or cleaning, we would have to turn over the machinery with which we do the work, and that we could hardly be asked to do. It would necessitate also that you should furnish the employees to manipulate the machinery and do the work that we can do better than any force you can send. We have a force of skilled operators. They are second to none anywhere, and our superintendent can handle those men working on private account a good deal better than an agent for the Government can handle the same men in there and operate on Government account. Therefore the proposition we make to you is that whenever you have any work for us to do we will do it precisely for you as we would do it for Senator Perkins on a ship of his.

We will give you the same terms that we give any private party, and, in case of a disagreement, your own officers in the Navy Department shall say what is right, as is done in cases of changes in plans in new construction; in such cases it is provided by contract that the Bureau shall determine what shall be allowed for changes in case of differences. We submit oftentimes to pretty hard terms in that respect, but, as to the two ships that were launched the other day, better hulls never went off. We took those contracts at a little over two million and a half dollars. The lowest bid next to us was something over $3,000,000 on each of them. We have been doing work for other people in the same sort of a way for a big percentage less.

On these large contracts important changes have been made since the contract was taken. We only ask reasonable rates, and, in case of difference of opinion, the board of changes in the Department determines the matter.

Senator BUTLER. Would your company be willing to make a proposition? Of course, if we accept the proposition made to us for a bonus, we shall have a dock there that we can use. The question is whether we will accept it and be forced to use it or not. If we do not accept that proposition, there must be some other dock in sight that we can use. Is your company willing to make a proposition that you will give the Government the preference you state?

Mr. PAYSON. For precisely what I have stated, and elaborated to any extent to make it safe to the Government. It will be reduced to writing under the direction of the Department of Justice, and our company will sign it.

Senator BUTLER. For any number of days?

Mr. PAYSON. Not for any number of days. Do not understand my proposal to be to lease out our establishment at a per diem to the Gov-

ernment, but to make any repairs, no matter how insignificant or how great, promptly and at reasonable rates.

Senator BUTLER. What I meant was in reference to the amount of work.

Mr. PAYSON. Whatever the work the Government has to do, it shall have that work done, and as to such work it shall have a preferential contract to the extent of the total capacity of that yard. Can I make it plainer? Of course that exigency will never come, as we believe, but if it should come the Government will have the preference.

Senator BUTLER. And get the preference at the lowest rates?

Mr. PAYSON. At the same rates other individuals will get.

Senator BUTLER. Without any bonus?

Mr. PAYSON. Without any bonus and without the expenditure of a dollar. We simply want the Government to understand that here is a shipyard ready to do business with you on just the terms it does business with everybody else, and without a dollar of expenditure unless the Government shall have the work done; and if you do have the work done it will be done as cheaply for you as for any ship Senator Perkins may own. And we desire to have all questions of the power of the Secretary to contract with us determined by law. Give him the power to contract with us, and we will do the work as I have stated. With such a yard, dry dock, and plant we can do whatever is desired better, more quickly, and more cheaply than any Government yard; that is certain.

Senator BUTLER. Is it not important to have this proposition from the company in due form?

Mr. PAYSON. The company will be very glad to submit it.

Senator PERKINS. It is understood that if Judge Payson desires at a later day to submit a proposition he will submit it. I think we understand your proposition, and we are under many obligations to you.

Mr. PAYSON. I have endeavored to be as brief and concise as possible, and if in any phase I have failed to make myself understood I shall be very glad to be more explicit. I will see that a formal proposal, in the line of my statements, will be prepared and filed with the committee in connection with this hearing.

Senator PERKINS. You have made yourself clear, and we know you represent a company that is thoroughly responsible and able to carry out whatever you promise.

Mr. PAYSON. Have I made myself thoroughly understood by all the members of the committee?

Senator BUTLER. Yes; I understand your proposition perfectly. What I want is to have the proposition before us in due form if you see fit to make it.

Mr. PAYSON. Very good.

Senator TILLMAN. I wish to suggest that we had a proposition that was in the air, so to speak, in regard to armor plate, which never materialized, but which was in the documents before the Senate in reference to that matter. If this company (and I have no reason to doubt its good faith or its purpose) will submit its proposition in writing as soon as possible in a way that would at least bind it morally——

Mr. PAYSON. Legally.

Senator TILLMAN. I do not know that we could have it if you simply bind yourself in a court of morals unless we should sign a contract, which would then be made a legal contract. If you see fit to put your proposition in a shape at least to bind you morally, and if the Government sees proper to go further to accept a proposition, we would have

some basis of intelligent action in the Senate when we come to disc the question of the appropriation for docks.

Mr. PAYSON. And it is with that view that I came before the c mittee.

Senator TILLMAN. You came for that purpose, and we simply that you submit the proposition.

Senator BUTLER. It is understood that you agree to it.

Mr. PAYSON. In the next few days, as soon as I can communi with the officers in New York, I will have it in writing.

In conclusion may I suggest that if we make this large expendi in the construction of this dock and furnish the Government with facilities as I have stated them there is no necessity whatever for a tional dry docks of extraordinary capacity on the Atlantic coast. dry docks at New York, Port Royal, and this dock will give all facil needed for this generation, surely.

I am greatly obliged to the committee for its courtesy.

ADDITIONAL STATEMENT OF W. N. DYKMAN.

Mr. DYKMAN. Mr. Chairman and gentlemen of the committe want to get clearly in the minds of the committee at the outset w this proposition is that the International Dry Dock and Construc Company has outlined in this amendment. For that purpose I w to read a part of a letter to the Secretary of the Navy from the In national Dry Dock and Construction Company, signed by Mr. Dow here. I do that because of the statement at the last hearing tha was not proposed to go into the repair business. I read from that le signed by Mr. Downey.

Mr. DOWNEY. Excuse me one second. We can save you the t The amendment covers specifically all that we ask and all that we pose to do. This letter was simply a preliminary proposition mad a hurry. Secretary Long asked me to do it quickly. The amendm specifically states what we propose to do.

Mr. DYKMAN. Still I want to say that the amendment is perfe suited to carry out the proposition to Secretary Long, and I think will appear from a reading of the letter. It is as follows:

"The International Dry Dock and Construction Company, a corp tion organized under the laws of the State of New York, desire construct and maintain a steel floating dry dock of the pattern design known as the Clark & Stanfield model, mentioned and rec mended by the board appointed by you to investigate this subj They propose to make this dock 550 feet in length, and of over 15 tons capacity, capable of raising and sustaining war vessels much la than any now being constructed or contemplated by your Departm

"It is estimated that this company will expend in the construc of such a dry dock, and in the land necessary to be held in connec with it, and in the plant absolutely necessary for the repair and struction of vessels, the sum of about $1,500,000. And in order, f that the expenditure of so large a sum of money shall seem warra said company feels that it is absolutely necessary that the Governm of the United States shall insure to it a sum at least equal to 6 cent interest upon the amount invested for a period of twenty y And in return for this sum this company offers to allow all the ves of the Navy of the United States the free use and possession of

said dock for a period of one hundred days in each year in times of peace, and in times of war its entire use and occupation upon terms to be mutually agreed upon, or, in the event of failure to so agree, terms to be effected by a committee or board of arbitration."

Now, we know the cost—$500,000—and they want 6 per cent on $1,500,000. The remainder is undoubtedly for the land and the plant that they propose to acquire and hold for the repair of ships. That is the one proposition that these people make; that they, who have not a dock, who have not a repair shop, who are not in the business, who so far as we know are absolutely without experience, shall be started by the Government, put upon their feet, and insured $90,000 for twenty years, for what purpose?

You have heard what the Newport News people have. In a smaller way, so far as our repair shops are concerned and our capacity to construct, we are in the same position. We have five docks, two of them graving docks, three of them floating docks, and we have no possible prejudice against the one in favor of the other. We use both. One of our floating docks could lift the *Texas*; could have lifted the *Maine*. Our graving docks take in anything but the six—all the vessels of the first class. We have a repair shop where we are building smaller vessels to-day. The only possible effect of enacting this amendment will be to put my company and this company at Newport News in this position: These men will have $90,000 a year in their pockets, and we can not do one bit of work without their permission. The dry docking of a ship is so large a part of its repair that if you give Mr. Wallace Downey the $90,000 in his pocket for twenty years he will command the repair business from Maine to Florida, and we can not live except by his gracious permission, or by buying him out, or by combining with him.

Mr. PAYSON. May I supplement that with a sentence? After they have the dock, the repairs which may be done in the dock can not be done, and nobody will pretend that they can be done, as cheaply as you or I can do it.

Mr. DYKMAN. I do not think they can. But I assert that the principle of this amendment is the most vicious that I have ever seen gravely proposed and considered in a legislative committee. We and our predecessors have invested $5,000,000 in our plant. We have taken Government vessels, not as we take the merchant marine, because whenever the officers of the United States get anything in our docks they do not allow us gross tonnage as we charge merchantmen, but chip a great big piece of our bills off. We have taken and will take them at rates much more advantageous to the Government than we ever give to the private individual.

Now we are in a position to do everything up to our capacity. We expect to enlarge our capacity. We have not asked anything of the Government and we do not ask anything. The proposition is that we and the Newport News Company and the Bath people up in Maine and the Atlantic and Boston—I think that is the name—and I do not know how many other ships along this coast, shall be put within the grasp of these gentlemen in Brooklyn, who have not a thing, but their sole stock in trade is sufficient assurance to come here and ask to be carried through twenty years.

I submit, gentlemen, if I speak with too great warmth, it is because a large part of what my associates and the people I represent have is invested in the dry-dock and repair business in New York City. I feel

much more than I express. I am afraid if I expressed my views fu
I should depart from the decorum of committee presentation in
remarks.

Now, there is not a bit of need of this dock on the Atlantic co
We have six ships that can not be accommodated on the Atlantic c
by the smaller docks. You have got two docks—one at Port Royal
one at the Brooklyn Navy-Yard. We know considerable about the d
at the Brooklyn Navy-Yard. It is a splendid dock. It has the
weak point at the entrance to the dock, unless our experts who h
gone there to learn the condition of the dock are mistaken, bec
we are dealing with the same conditions of soil that obtain at the Br
lyn Navy-Yard. We have within the last three years reconstru
one of our docks so that we should not hesitate to take the largest
tle ship if we could get her in the dock. We are experimenting on
ing the same conditions, expecting to enlarge our plant. We h
watched the No. 3 dock very carefully, and it is stated to me by
engineer, in whose judgment we rely in everything we do, that the
3 dock will do all the work its capacity allows it to do, and that
soon.

We have heard from Captain Dashiell about the Port Royal
You have got two docks for these ships. That, I venture to s
a greater proportion of docks almost than we need. But now
proposition is that we are to have four or five other docks provide
in the naval appropriation bill. One of them is to be this flo
dock. Negotiations are on foot for the purchase of the Stettin
I do not know to what point the negotiations have reached.
the smaller vessels could be accommodated by the smaller docks.
minute we have this dock that they are trying to purchase and th
are going to build out of an appropriation in the appropriation b
shall have three docks for six ships. The next step is to have
for every ship. That will be the result if this amendment is pla
the appropriation bill. That is far more docks than are necessa

There are other objections to this proposed amendment. Y
not get the hundred days when you need them. That was brou
by Senator Perkins. I remember his remark at the last hearin
the very time you wanted the hundred days, or any day, you could
it; the liner would be in the dock. Let me say in this kind of
and in a graving dock there is done such work as lengthening a
You do it; we do it. That is to say, we cut a vessel in two an
her upward and put in a midship section. We take out the wh
tom and hang up the machinery inside and build a new bottom.
suppose your limping Government vessel should come along w
had at New York, for instance, a river boat in our dock or an
dock. It would be doing the same thing. She is cut in two. B
and stern sections are far apart. All the power of the Gove
could not get that boat out. Or when the boat is in there wit
hole in her bottom you can not get her out, and you will not g
hundred days.

I was speaking of giving a monopoly. Let me speak of the
& Stanfield model. I visited Mr. Secretary Roosevelt this m
to learn in more detail what he had in mind when he spoke bef
committee the other day. Mr. Secretary Roosevelt said that he
care for the Clark & Stanfield model or any other model; t
believes, as we believe, that this is the latest expression of th
floating dry dock, but that he would prefer to have the competit

he world, and he thought if Clark & Stanfield were put
:y with our own engineers it would be all that they would
ore, Mr. Roosevelt authorized me to say that he would be
make a statement in writing to the committee.
not help but suspect when we saw this amendment, and
d met Mr. Clark and heard from him, that some sort of
ent was made by which these gentlemen had secured a
the Clark & Stanfield model and plans, that would give
to Clark & Stanfield or their licensees or assigns. And
nfield would have it under this amendment. This very
is here would serve for a model of the Portsmouth dock,
eption that the sides are brought down here [indicating]
ing up on top, and this is made in three sections.
exhibiting). I have a picture of the Portsmouth dock here,
ss it around.
AN. The Portsmouth dock was built forty years ago and it
features.
It is a very worn photograph, but it shows very plainly
tion of the dock.
AN. It shows the caissons in place. We have a floating
gid sides. Our balance dock is a floating dock with rigid
sectional docks are divided, as this is, into sections. With
ndable frankness Mr. Clark admits that he has appropri-
n ideas. In the balance dock the sides are perfectly rigid
t has not the several pontoons; it is of one pontoon.
ERKINS. It has one rigid pontoon?
AN. One rigid pontoon, with rigid side walls, is our bal-
The sectional docks we have do not have side walls, but
rigidity. In short, I submit that American engineers and
ntracting firms ought at least to be put on an equality
. Clark & Stanfield and that that part of the amend-
l be kept off. Strike out that part of the proposed
and make a change in one other respect, so that the
ment shall determine what kind of a dry dock. If you
take, in any form or shape, the principle of this amend-
vy Department ought to select what kind of a floating
refers.
LLMAN. Just advertise for proposals.
AN. Advertise for proposals and let us bid against the
e will be entirely satisfied with the result. If the subject
lizing or hiring of docks is to be seriously considered, we
mendment be amended in these two respects. First strike
s that give the Clark & Stanfield model a lead, and, second,
s prepared by the Navy Department and ask them to call
ve bids. Then if we lose it will be the chances of busi-
nit that no kind of paternalism in any kind or shape should
nction of this committee; that subsidizing this adventurer
ess should be put down, so that in no form will it again
a committee of either House of Congress.
ERKINS. If this dock were to be built upon the Clyde or
ought to the United States we would have the advantage
tive tariff. Would you be on an equal footing to compete
competitors? Have you considered that phase of the ques-

AN. Of course the Government can get it in duty free and

we can not, but it is hardly in accord with the principles. It [illegible] an advantage of course; it would be a great advantage. I [illegible] arguing the other question.

Senator PERKINS. You are willing to waive that?

Mr. DYKMAN. I believe we can build as cheaply here, protectio all. I think our laborers will do so much more that the same that enables us to send our rails and our materials in the man tured form abroad and compete and win will enable us to build he spite of a protective tariff.

Senator TILLMAN. Is not structural steel and all the material th necessary to go into a dock just as cheap here as in England?

Mr. DYKMAN. The Carnegie Company have lately closed a contr for some thousands of tons of steel at a price, I am informed, lo than was ever known in the world before, far below the price of st in any other country.

Senator CHANDLER. They have made a contract with Europ purchasers?

Mr. DYKMAN. One, I think, is for a gas holder and another is structural work of another kind. I do not carry prices very well, I think it was $21 against $28.

Senator CHANDLER. I had an impression that they had made a tract and sent some steel abroad.

Mr. CLARK. Twenty-four dollars is the English price.

Mr. DYKMAN. And this contract was closed at between twenty twenty-one dollars. The Cramps works can build this dock. They build it just as quickly as it can be built abroad. Any bridge com can do it. Is it contended that we can not punch holes as fast as punch them abroad? There is not anything in that. I know very on this subject, but I know our bridge makers can do this work.

Senator PERKINS. You claim that there is no foreign patent would conflict in regard to the system or plan of Clark & Stanfield in the Havana dock?

Mr. DYKMAN. Oh, there is no patent on the Havana dock.

Mr. CLARK. It has a patent in the United States.

Senator PERKINS. I had that impression.

Mr. DYKMAN. Have you patents?

Mr. CLARK. Yes.

Mr. DYKMAN. No; not on the principle, but simply on some o devices.

Mr. CLARK. On the combination as applied.

Senator CHANDLER. Let me ask Mr. Clark how he could get a p on a combination if it is, as he said the other day, substantially lik old Portsmouth wooden dock?

Mr. CLARK. No; there is no patent on that; there is no patent o sectional dock; there is no patent on the stiff side dock; but whe combine all three into one dock you get a patent, the self-docking

Senator CHANDLER. How many patents have you taken out?

Mr. CLARK. We have several patents.

Mr. DYKMAN. I wish to say only one thing. If that is so, the see what there is in the amendment. I did not know there was a pa Knowing something of patent law and litigation, I think the stre of the patent is slight, but to the extent——

Senator PERKINS. This fact was brought out only by an infer

Mr. CLARK. I wish to mention that it was only drawn in the few days. Only yesterday I received a letter from our patent a informing me that a patent had been drawn.

ator CHANDLER. I understood Mr. Clark to say that they did ve American patents. I asked the question and understood him that there were none.

ator PERKINS. He did not state that patents had not been applied I drew the inference that Mr. Clark had applied for it and there- asked the question.

enator CHANDLER. What was the answer?

enator PERKINS. That he had.

r. DYKMAN. I wish to say that we would deal fairly with Mr. Clark we would deal fairly with anybody else, but to the extent that those ents are good it places us in the hands of patentees. While we feel t we can build a dock of this kind, and would build a dock, and that body else could build a dock almost precisely like it, or precisely like -if the field is left open for us to compete we can build for the Gov- ment—I do submit that the Government ought to build and own its docks and ought not to send any dock that it has the use of out competition with people who are supporting themselves.

enator TILLMAN. You have no objection to the Government using private dock at commercial rates?

r. DYKMAN. No, sir; we would be very glad to let them to you, use our docks are not full half the time.

nator TILLMAN. But you do not believe in subsidizing a dock any?

. DYKMAN. I do not, Senator.

nator TILLMAN. You do not object to this other proposition, ise you are on the same basis; you are in the market to dock ships epair them?

. DYKMAN. We are very glad indeed to see them built. There is jection to that, and we will meet them in competition.

. PAYSON. And all we ask is a fair field as to others.

. DYKMAN. That is all we want.

STATEMENT OF WALLACE DOWNEY.

ator PERKINS. What is your official position?

. DOWNEY. President of the International Dry Dock and Con- tion Company; a member of the firm of Townsend & Downey, rrights.

ator PERKINS. Of New York?

. DOWNEY. Mr. Dykman kindly gave you to understand that I n adventurer.

. DYKMAN. I did not mean to imply that you were an adventurer is business.

. DOWNEY. I was going to refer you to Bradstreet and to the ship- fraternity in New York. I have been in the business since I was ars old; my partner has been in it for the last thirty years.

. DYKMAN. I referred to the International Dry Dock and Construc- Company as being an adventurer into the business; not to you, Downey.

. DOWNEY. I came here in November and made a call on the Sec- y of the Navy, and talked over the dry-dock question with him. w the position that the United States Government was in in regard docks. A short time before that we sent the *Indiana* down to Hali- Nova Scotia, to dock her. I had confidence enough in the good nent of the Secretary of the Navy and the Assistant Secretary and

British dock.

Senator CHANDLER. The fact is well known that the Port Royal needs preparation.

Senator TILLMAN. It needs $10,000 worth of preparation.

Senator CHANDLER. And that the New York dock was then le and undergoing repair.

Mr. DOWNEY. Yes, sir, and is also at the present time. Mr. l velt said here the other day that a commander of one of our informed him that he would rather take his ship into battle and ta chances of bringing her out safely than he would take her to th Royal dock and dock her in ordinary tide and get her out safely.

Senator TILLMAN. Mr. Roosevelt is a very able and bright ma Mr. Dashiell is a man whose familiarity with the details of dockin construction is great. In other words, he is a mechanic, so to while the other man is a boss. When you come down to a ques detail such as this, those of us who are a judge of practical affai judge for ourselves.

Senator CHANDLER. It was mere rhetoric, like some of us are habit of using, when he said he would rather take her into battl dock her at Port Royal.

Senator TILLMAN. Of course, we all know it was purely rheto

Mr. DOWNEY. That was not Mr. Roosevelt's statement. He s commander of the ship told him that. At any rate the fact r that they sent the ship *Indiana* away and did not dock her a Royal. There was some good reason for it. The only other d addition to the ones in existence at that time was the new dock Brooklyn Navy-Yard, for it was completed some months befor and it had proved a failure. It is a failure up until to-day. Peopl out any prejudice and people who know the situation have got grave doubt as to the durability of that dock after the repairs completed and after the cofferdam is removed.

Senator TILLMAN. Are you at all familiar with the condition ing at the Brooklyn dock?

Mr. DOWNEY. Yes, sir.

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or TILLMAN. You have a doubt as to whether the Brooklyn
ı ever be made safe?
OWNEY. I have. It may dock one ship; it may dock two; it
k a dozen; but that dock, in my opinion, will never be a per-
safe dock.
or PERKINS. I only want to say, if you please, that Mr. Dyk-
o represents the largest docking company in the United States,
ifferently.
or CHANDLER. I understand that the dock is now reported as
and fit to take ships into it.
OWNEY. I am not antagonizing the report. I simply give you
onal opinion.
or CHANDLER. You give more than that. The actual state of
k to-day is one of complete repair and fitness for the admission

OWNEY. It is simply, in my opinion, in a state of uncertainty.
or CHANDLER. You think it will continue to leak, but it does
is minute leak, as I understand it. Do you understand to the
?
OWNEY. The latest report is that it does not leak.
or TILLMAN. They have not taken the cofferdam out?
OWNEY. The cofferdam is still in.
or TILLMAN. The cofferdam is keeping it from leaking, and not
itself.
OWNEY. I will state the reason for my proposition to the Gov-
Looking over the position of all the docks it did not appear
at there was any immediate prospect of any dry dock being
fit to take the heavy battle ships of the United States Navy,
ccurred to me that it was possible to do it safely in a dock of
I had already come to the conclusion that this was the bet-
of a dock for all purposes. I came in perfect good faith to the
y of the Navy and made a proposition to him.
sidered it very favorably, and told me, as this gentleman (Mr.
says he told him, that the proposition struck him as being a
. He said, "I am so favorably impressed with it that I will
ate your proposition, or the sense of it, in my report to Congress,"
did. After he had done that, to bring it before you gentle-
course an amendment had to be introduced in the Senate. I
he amendment. It says substantially what we propose to do
t we will do with the exception that it does not fix the sum of
That is left entirely to the discretion of the Secretary of the
whoever has the authority to make the contract for the Gov-

Secretary of the Navy is hereby authorized at his discretion to
o a contract for the docking of vessels of the Navy for a period
y years * * * *Provided*, That such dock shall afford all
ties needed."
tract made under this amendment would mean that we would
ed to furnish all facilities needed that the Secretary or the
charge of the Department would consider necessary, whether
oper dock, whether it has a proper draft of water, whether it
er tools, whether he would prefer to bring his own men there
he repairs, or whether he would prefer some other company to
It reads "all the facilities;" it is made as broad as possible.
provided further, That such docking service shall be rendered
el floating dry dock of a design and pattern known as the
d Stanfield model, to be located in the harbor of New York."

reason why that particular provision is in there is simply bec
know that that kind of a dock is all right. I am so satisfied of
we are ready to go ahead and spend the money, providing the G
ment will say they want to use it.

Senator PERKINS. Pardon me a moment, but I should like to
you address yourself to the point I will state. If the committ
disposed to favorably consider the amendment and recomme
adoption are you willing that the committee shall amend the a
ment by omitting the words "Clark and Stanfield" and call it
docking dock, or a pontoon dock, or such a one as may be desig
by the Secretary of the Navy?

Mr. DOWNEY. Perfectly willing; and while I would allow that
stricken right out I would still stand by this particular form of a

Senator PERKINS. You would be willing to accept an amendm
the amendment so as to read such a dock "under plans and spe
tions prepared by the Secretary of the Navy?"

Mr. DOWNEY. No, sir; I would not enter into a contract to spe
money to build a dock under specifications adopted by the Secret
the Navy or anyone else unless I was perfectly satisfied that those
fications would finally produce a dock that was as good as this o

Senator PERKINS. You heard the testimony of Captain Da
to-day. He seemed to be very partial to this class of a dock.

Mr. DOWNEY. Yes, sir.

Senator PERKINS. Pardon me for having interrupted you.

Mr. DOWNEY. Certainly. I think that if a subsidy or an enco
ment by the Government of a private dock was considered, and
left open to admit of a dozen or two dozen different types and pa
of docks, it would simply lead to the trouble of an experiment

Senator PERKINS. That plan has been pursued by the Gover
in the construction of our war cruisers, gunboats, torpedo boat
battle ships, as you know. We paid England for one set of pla
the *Texas*, which have not been near as satisfactory as those des
by our own constructors.

Mr. DOWNEY. But the Government paid all the bills, both in bu

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nes who have an option on that patent in the United States, so that ou alone could build such a dock?

Mr. DOWNEY. No, I do not think we are.

Mr. CLARK. No. I can answer that question. Not at all an option.

Mr. DOWNEY. Simply permission.

Senator TILLMAN. Simply permission; but could other builders have ıe same chance to use this model in the event that it is decided by the 'avy Department to be the best existing dock?

Mr. CLARK. We have simply done with Mr. Downey what we have one with your Department; we are prepared to provide working drawıgs for a certain sum.

Senator CHANDLER. It seems to me the International Dry Dock and 'onstruction Company have only made proposals as they should have ıade them under the circumstances. Mr. Dashiell recommended to ıe board that the working drawings should be obtained from Messrs. 'lark & Stanfield if a dock of this kind were to be built. The whole oard recommended to the Secretary as follows:

"For docks of this class the board recommends the design of Messrs. 'lark & Stanfield, fully described and set forth in Appendix A."

Then the Secretary says in his report:

"The company proposes to construct and maintain a steel floating lry dock of the pattern recommended by the board."

So the company have simply adopted the previous policy of the Department.

Mr. DOWNEY. Before that report came out, before I knew that Mr. Dashiell went across to look at the dock, I had adopted it as being the ıne, if I ever had a dry dock. After the report came out of course I ıgreed with that perfectly, and so made the proposition in accordance with the report and with my own ideas.

On the type or kind of this dock, as to whether it will do the work ır not, I will not say anything further. That has been pretty thorıughly gone into. If there have been any doubts, and they are not ıettled now, I do not think anything I could say would settle them. The only thing I would say in regard to that is that if there is any loubt about its doing the work under our proposition, we spend every lollar for the dock, we demonstrate fully and fairly that the dock will lo the work, or we will never be entitled to a dollar. If the contract vas made under the provisions of this amendment we would have absoutely to deliver service and continue to deliver service year by year. ımmediately that we did not the contract would cease; it would be ıull and void, and we would be the losers. So we are taking all the 'hances as to the type and kind of dock.

The sum of $90,000 is mentioned in the amendment, but the item loes not fix the sum. It specifies particularly that it is not to exceed hat amount. The amount of money limits the Department in the sum hat they could pay. If they enter into this contract they could not ıay any more than that, but it does not limit the Department as to how ittle they might offer if the amendment shall be adopted. It is at the liscretion of the Department all the time, but $90,000 limits the Department so that they could not pay more than that if they wanted o do so.

Senator TILLMAN. Do I understand you to say that you drew the mendment?

Mr. DOWNEY. Yes, sir.

Senator TILLMAN. Upon what basis did you calculate when you put ı $90,000 as the maximum?

between 2,000 and 3,000 tons every day in the year.

Mr. DOWNEY. It is no use to assert now what you wo
have not any dock that will dock the *Indiana*, or anyw
This proposition was made with the idea of docking battle
that the United States docks can not dock; that it could
the time and can not dock for two or three years to con
Brooklyn dock is a success.

Mr. DYKMAN. We have docks that cost a million and a
and we will give any of those docks, I do not but
for $90,000 a year. We will build and give to the United
day in the year one of our docks for $90,000. I should no
rupted you if you had not made a miss atement. As to
there is no docking company on the Atlantic coast getting
for any of its docks.

Mr. DOWNEY. As to the capacity of this dock, the *I*
ship of her class, is 10,000 tons. The dock rates at New
fixed by the company that Mr. Dykman represents are
ton for every day except holidays and Sundays on the re
nage of the ship. The *Indiana* is 10,288 tons; I will put i
10,000 tons. The dockage on that ship per day, if Mr. Dy
dock her now, would be $1,600 for each day. I think he w
say that. It would be $1,600 for each day on the basis
rates fixed now in New York.

Senator PERKINS. That is on the gross tonnage?

Mr. DOWNEY. No, I am speaking of the *Indiana*. I
10,000 tons. She has 288 tons over that; but take her at
her dockage at the present dock rates in New York wou
per day for every day except Sunday or a holiday. For 1
service as that, if Mr. Dykman could render it, would cost y
So you see, if I was standing right fairly upon this $90,
actually did deliver 100 days of service to the 10,000-ton
make very little more than 50 per cent of what Mr. Dykma
would charge you if they docked the ships now.

This proposition of mine has brought out propositions in

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ator CHANDLER. Does your proposition contemplate that the done on the vessel after she gets into the dock shall be done by nited States?

. DOWNEY. It shall be done by the United States Government. United States Government is at the expense of maintaining navy-s.

nator CHANDLER. All you do is to give the use of the dock?

:. DOWNEY. The use of the dock.

nator CHANDLER. What do you estimate the additional cost of plant necessary, besides the dock, to do the work of repairs upon ship?

r. DOWNEY. The Government would have nothing to do, as we ld put that down ourselves. You do not mean that the Govern-t would have any plant there?

nator CHANDLER. What would be the cost of the plant, whether longed to the Government or to you, that after the ship was in the , which is all you give under the proposal, would be sufficient to ay repairs that would have to be made upon a Government vessel?

:. DOWNEY. In the neighborhood of $200,000 would be the cost for per repair plant.

:. DYKMAN. I should like to ask how the Government could do repairs without the very large tools it has to have with which to repairs on ships.

:. PAYSON. The $200,000 covers that.

:. DYKMAN. That is his statement, but this is my question. The rnment ship is in Mr. Downey's dock 3 miles away from the navy-. How can the Government transport its crane and its huge tools ssary to make repairs?

r. DOWNEY. Everything is at this dry dock that is necessary for hing the Government may want to do.

nator PERKINS. Trip hammers, lathes, and lifting machines would to be there.

r. DOWNEY. They would be on a float if done at the navy-yard.

r. PAYSON. I wish to make a single inquiry in regard to a matter our engineers regard as very serious. How much water will this draw before you commence to lift a vessel? Will it draw more 40 feet?

r. DOWNEY. Forty-two feet.

r. PAYSON. Where is there anything by which you can get the le ship into 42 feet of water?

Ir. DOWNEY. There are places in New York that I would have pro-ed to receive that dock. I would have them prepared in three nths.

Ir. PAYSON. There are none of them now.

Ir. DOWNEY. That is a problem of ours that we will have to solve.

Ir. PAYSON. But I am asking as to the fact. Our people say 50 to eet will be required to operate that dock before it can go to work.

r. DOWNEY. That is an exaggeration; 41 or 42 feet. There are ty of places in New York where there are 35 feet of water.

nator CHANDLER. I should like to have Mr. Downey finish his ment.

:. DOWNEY. I was dealing with the cost of the dock to the Govern-. Ninety thousand dollars is fixed in the amendment. Even if mendment were passed and the law made under it, the Secretary e Navy has the making of the contract. He might, if he saw fit, lid not think the dock was at all necessary, simply say to me, "I

will give you $5,000 for 200 days' use of your dock." I would not take it, and that would end the whole thing. It will remain absolutely with the Secretary of the Navy, or the officers in charge. It is to be done at the discretion of the Secretary of the Navy. He shall be given discretion to furnish dockage if he thinks it is required.

There is no catch, there is no trickery, there is nothing about it at all. It is simply a plain, flat-footed business proposition to supply so much of a necessity for an amount to be fixed between the contractor and the man who wants the service. There is nothing underhanded or strange about it, and it remains right with the Secretary of the Navy whether it shall ever be put into force or not. If he can not get satisfactory terms he need never draw a pen over it. Under the provisions of this amendment after we did enter into a contract at any time if for any reason the service should cease to be satisfactory to the Navy Department the contract would be null and void at once. It must provide facilities and always provide them.

As to whether it is a good thing for the Government to maintain dry docks, I say it is a fact that the English Government pays the Halifax Docking Company $30,000 a year for the dock at Halifax that the *Indiana* was in. That dock never would have existed at Halifax, probably; it would not have existed now, anyway, if the Government had not given them that subsidy. It gave them a bonus, and they established a splendid dock and have it there. If the English Government wants it at any time it has it. The rates there are 20 cents a ton for the first day for hauling a ship. The lay days are 12½ cents a ton. So at those rates in docking one or two heavy ships the rates would come higher than this $90,000. If we stood right on that for a hundred days' service it would run away beyond it. The English Government also subsidizes several other docks. I have that information from a member of the Canadian Parliament. I think there is no doubt about its accuracy. We propose in connection with this dock, if it ever is established under this amendment, that all the expenses, all the risks, all of the repairs, every outlay shall be borne by us, and the Government shall have nothing to do with it. We shall furnish all the labor to dock the ships and to undock them.

Practically we would have to be an insurance company while the ship was in the dock. That is a feature that is not embodied in a Government dock now. A ship comes in and an accident happens to her through any carelessness. The Government, if it is a Government dock, pays for her. The dry dock in New York to-day is practically an insurance company for a ship every time they put her in the dock. Any accident that occurs there the dock company would be liable for. That is one of the things we have to take into consideration. The docking is practically the insurance of the ship. In short, it is just as if I went to Senator Perkins or any other shipowner who needed this service and I offer to enter into a contract with you to furnish what you require at a price to suit you, and we have got to continue to furnish the service or we do not get any money.

Mr. Dykman has made the statement here that I have not got any plant, that I have not got any docks, and never had any docks. I want to say most emphatically that he is wrong at least, if he did not intend it to be anything worse than that.

Mr. DYKMAN. The International Dry Dock and Construction Company——

Mr. DOWNEY. Excuse me. You have interrupted me while I let you speak and say all these things about me, and I never interfered with

ou at all. I simply want to straighten out the matter, if you will llow me. I have been employed in the business of handling ships and oing work on ships since I was large enough to do anything. I have petition, and it is, I suppose, before this committee, signed by fully 5 per cent of all the heaviest shipowners and importers in New York, ndorsing in full the proposals of this proposition and the proposition tself, and certifying to you, gentlemen, that these facilities do not exist t New York; that New York is behind the age entirely in that regard, nd that they have every confidence that the Government would get ood service. Those merchants know what this service is worth, ecause they are paying the bills. They were all very particular, before hey signed that petition, to go into the sum of money and the service roposed to be rendered, how it was to be done, and all that kind of hing; and they are satisfied, as I say to you, gentlemen, and they fully ndorse it.

The business people represented on that petition are the best in New York. They would hardly lend themselves to any adventurer's scheme r anything that was wrong, because they have got no interest in doing t. They simply tell the Government that they think it is all right; that hey know it is all right, as far as the capability of doing the thing and he prospects of doing it are concerned. I rest upon that. Before Senator Platt would have anything to do with my proposition and bring it efore you gentlemen I had to assure him beyond the peradventure of doubt that if this proposition was entertained seriously it would not e a fizzle through no money being provided to furnish the plant, but he money had to be ready, providing the Government took hold of it, o that it would not be turned over and time lost.

If the Government enters into that contract it will get the service it needs. It will get it at a reasonable figure, and it will get it in over fifty per cent less time than it could get it through any proposition hat has been made here or from anything that has been said here. Nothing has been said here that promises directly to give the Government the service that is needed so badly. Everything is on conditions. One man says, "I will build you a dock if you will promise me that no hip shall go into it that I can not dock somewhere else." Another man says, "I will build you a dock if you do not bring any of your men into my yard and do not interfere with my business in any way." He will dictate all the things to be done in that way. The Government is maintaining the navy-yards. It is maintaining men in Brooklyn and in several other navy-yards, and whether those men do every day exactly the worth of money they get they must be there and they must be kept there. I claim that I should simply furnish the tools and let them do the work.

Senator TILLMAN. I am compelled to leave. It is now seven minutes after 1 o'clock. We have given these gentlemen seven minutes beyond the time stipulated.

Senator PERKINS. Is there any other particular statement that you wish to make?

Mr. DOWNEY. I should just like to ask that I be given the privilege of submitting a letter to the committee.

Senator PERKINS. There will be no objection to that.

Senator TILLMAN. Certainly; there will be no objection to it.

Mr. DOWNEY. I wish to submit a letter explaining just exactly what these provisions mean.

Senator PERKINS. If you will be kind enough to do that, it will be embodied in the report.

Mr. DOWNEY. I thank you very much, gentlemen.

Senator PERKINS. The same privilege will be accorded to others, if they desire it.

Mr. DYKMAN. I have some memoranda which I should like to submit.

Senator PERKINS. Of course, the committee desire to get all the facts before them in order to act intelligently upon the question.

Senator BUTLER. There is just one question I should like to ask Mr. Downey. Your company propose now, as I understand it, to put up a machine shop and have tools and everything ready for this dock?

Mr. DOWNEY. Yes, sir.

Mr. BUTLER. Does this $90,000 cover the use of those tools?

Mr. DOWNEY. It covers the use of the dock and plant. The Government simply brings its own labor and furnishes its own material.

Senator BUTLER. But you furnish all the tools?

Mr. DOWNEY. We furnish the tools and the dock. Any lathes or heavy things they want to handle for repairs would always be on that dock.

Mr. DYKMAN. That is not the amendment.

Mr. PAYSON. Not at all.

Mr. DOWNEY. If these gentlemen will try to read the amendment intelligently (but they do not want to do that), they will see that the contract would have to be absolutely satisfactory to the Secretary of the Navy.

Senator PERKINS. I think it would be of more interest to you, Mr. Downey, perhaps, to have the committee treat the subject in the way you want them to consider it rather than to have your opponents present it.

Mr. DOWNEY. They are trying to influence you to believe that there are all sorts of tricks in this proposition.

Senator PERKINS. We have on this committee Mr. Chandler, ex-Secretary of the Navy, Senator Tillman, Senator Butler, and many others. The committee are competent to deal with the question, and they will deal fairly with it.

Senator BUTLER. The purpose of my question was not to bring out any particular point, but in order to know specifically what is covered by the proposition. We have your statement here, and you will put it in your letter, that you will furnish the tools.

Mr. DOWNEY. Yes; the tools.

Senator PERKINS. That is an ambiguous term. A small lathe to handle a shaft that weighs a ton does not cost very much. A propeller to turn a plate machine is a very different proposition.

Senator BUTLER. He is to furnish everything necessary to do the work, I understand?

Mr. DOWNEY. I want just to call attention to the fifth line of the amendment: "That said company shall furnish all the facilities needed." If that is not explicit, I meant it to cover everything.

Senator TILLMAN. That is not explicit at all. It merely means that the dock shall afford the facilities for anything in the shape of repairing.

Mr. DOWNEY. No, sir. If I had been a lawyer, when I drew the amendment probably it would have been drawn very much better; but the contract would be drawn, I presume, by lawyers able to do it and able to protect the Government, if ever such a contract is entered into, so I have not wasted any sleep over that part of the proposition. The Government will be able to look to their own interests, I think. I am not a lawyer, and I am not smart enough to trick them or do that in any way, if I wanted.

tor BUTLER. This is to be a floating dock?
DOWNEY. Yes, sir.
tor BUTLER. If we should want to take it down to Hampton or up to New Hampshire, would your vessel with tools go along ?
DOWNEY. No, sir. That has simply been told you by Mr. Clark. no such thing as a floating workshop exists in the world. Is nch a floating workshop, Mr. Clark?
CLARK. No; not for private work.

STATEMENT OF FRANK B. KING.

KING. Mr. Chairman, I have very little to say. I said I would five minutes. I do not think it is necessary to occupy more ne.
tor PERKINS. You are a civil engineer?
KING. I am a mechanical engineer. What I had to say divided nto the commercial side of this matter and the mechanical side. kman has said everything I could say on the commercial side, gh I had thought out quite a little in that direction, and he so admirably that it does not seem worth while to add a sin- rd, except to say that I think if this amendment should become t would work a commercial outrage in this country. An outrage is an outrage of all. I think it would be an abominable prece- set, and the result of it might be very far-reaching. It might many other contracts of the same sort being made without a chance for the people interested to compete.
lieve Mr. Dykman pointed out the tremendous disproportion n the cost of this dock and the possible repair plant that it be necessary to operate in conjunction with it, and he stated e amount at which this company proposes to capitalize is 000. When Mr. Clark was giving his testimony I elicited from e fact that the dock in Stettin cost only £91,000, and yet it is a f 13,000 tons total lifting capacity. That, of course, is in the orhood of $450,000. Now, we can readily see that they are asking ent interest on that sum of money.
DOWNEY. That is time wasted. Excuse me, Mr. Chairman. Mr. s talking still of the fixed $90,000. That does not enter into it He is only wasting time.
KING. Why was $90,000 ever mentioned in the amendment?
DOWNEY. I explained why. It was to come to something defi- If the Secretary of the Navy under that contract chose to give 000, that is all I would receive. It is with the Secretary of the not with me.
KING. It was further mentioned in a letter I have seen (I have opy with me) that they expected the annual repairs on this dock them $45,000.
DOWNEY. We never made any such statement.
KING. It is in the letter.
DOWNEY. I beg pardon, it is not. I wrote that letter. It is not The gentleman is only wasting his time.
KING. Is there any statement as to the amount for repairs?
DOWNEY. Yes, sir.
KING. Is there a copy of that letter on this table?
DOWNEY. I have it here.

Mr. DYKMAN. "Operating and repairs."

Mr. KING. Then I withdraw that. As I said I have not the benefit of a copy of the letter in my possession. I read it only once. So I am not disposed to put you in any unfair light in that regard. But I think I have shown that the capitalization is altogether an unnecessary one and that——

Mr. DOWNEY. That is a matter of our own entirely. It does not make any difference to the Government whether it is $5,000 or $500,000; the Government would pay just so many dollars for so much service.

Senator PERKINS. Mr. King, please make your statement and then we will weigh it with the other statements, and if there are any incongruities or ambiguities we shall try to reconcile them.

Mr. KING. The commercial side of the matter has been so thoroughly ventilated by Mr. Dykman that I feel it is quite unnecessary for me to add anything more.

Senator BUTLER. Does not the amendment give you an opportunity to make a contract with the Secretary of the Navy? It does not limit the Secretary of the Navy to any company?

Mr. KING. I have not a copy of the amendment before me.

Senator BUTLER. It is open. It allows the Secretary of the Navy to make a contract with any company. It does not limit the work.

Mr. KING. Then the amendment should provide for advertisements and for the fullest public notice of what is going on.

Senator BUTLER. You would be perfectly satisfied with a full opportunity given to all companies to compete?

Mr. KING. Yes. The only thing I desire in this matter is to put everybody on the same footing.

I was going to make a few remarks in reference to the mechanical details of the dock. I have been connected with marine enterprises for twenty odd years. I have really done nothing else since I came of age. I want to say that I am strongly impressed with the desirability of floating docks for the Government. When the recent dock board was organized I appeared before the board and gave testimony to that effect. I considered at that time that the Clark and Stanfield dock was the best illustration of a dock of that sort. At the same time I put certain inquiries into effect which resulted in bringing out the photograph which has been before you, and I satisfied myself that there is no essential principle or combination of principles in that dock that is not the property of the American people.

I should like further to say that, thinking over it a great deal, I detected what I think are mechanical defects in it. I do not regard them as exceedingly serious, yet I think they could be removed and a dock could be built which would meet all the requirements; that is to say, it would be what you have in the bill now with regard to the proposed dock at Algiers. It would be a floating graving dock, self-docking, and yet do away with a feature which I consider it very important to avoid if possible. Mr. Clark showed how the dock is made of five pieces.

He says, and Mr. Dashiell, I think, testified, that by reducing the number of pontoons to three in the bottom they had accomplished a material improvement. Still, Mr. Clark tells us that that dock is connected together by 2,000 pins. Now, we all know what is the character of those connections. The pins are liable to be readily disconnected, knocked out, and if they are knocked out your dock resolves itself into five pieces. This dock is supposed to go to sea. It is supposed to be towed from port to port, if necessary. It is supposed to

pick up vessels, but not in very rough water. I suppose no one would undertake that. Still it would be expected to operate, and the officer in charge of it would be justified in trying to pick up a ship that was in a sinking condition—that was injured.

I want to say that I consider that method of connecting the dock defective, unless something else can be brought out better. It seems to me it is entirely within the ingenuity of American engineers to construct a dock that shall be exactly like the old Portsmouth dock, having the feature which I regard as a very valuable one, the floating-graving combination, and still be self-docking without resorting to this method of connecting the bottom and the sides. That is to say, I would build that dock of the type of our old wooden docks, practically of one structure, and I would accomplish the self-docking operation in other ways, either by putting pontoons in or by some special modification. I have a good method in my own mind by which that could be accomplished. I do not set any value upon it at all. I am entirely willing to place it at the service of the committee or at the service of the Navy Department.

I only want to say further that, with regard to getting the service of such a dock as that, it seems to me a thousand times better that the Government should own the dock, take it anywhere it pleases, and have the use of it all the time, instead of threatening private enterprises.

Senator PERKINS. I will ask Mr. Downey if any further statement he may wish to make will be put in the form of a letter or brief, or does he desire that Mr. Blackburn may be given an opportunity to appear before the committee again?

Mr. DOWNEY. I will submit a letter to you.

Senator PERKINS. We thank you, gentlemen, for your attendance, and the members of the committee, I think, heartily appreciate it.

The committee adjourned.

APPENDIX A.

PETITIONS IN FAVOR OF THE PROPOSITION OF THE INTERNATIONAL DRY DOCK AND CONSTRUCTION COMPANY.

NEW YORK, *January 27, 1898.*

To the Senate of the United States:

Whereas the International Dry Dock and Construction Company, of New York, has made a proposition to the Navy Department at Washington, offering in consideration of a fixed sum annually, to furnish adequate facilities for the dry docking of the United States naval vessels at the port of New York; and

Whereas an amendment to the naval appropriation bill will be offered during the present session, in the Senate of the United States for the purpose of obtaining authority for the Secretary of the Navy to enter into a contract with the said company in accordance with said proposition, as set forth in the amendment.

We, the undersigned, knowing that the larger vessels of the United States Navy and naval reserve and mercantile steamship fleet can not be dry docked at this port, fully indorse the above-mentioned proposition, and respectfully petition your honorable body to grant to the Sec-

agent; White Star Line, by E. J. Adams, No. 9 B
New York City; New York and Cuba Mail Steams
pany, James E. Ward & Co., New York City; W.
& Co., by J. W. Grace, first vice-president; New
Pacific Steamship Company Limited, W. B. I
secretary; Lewis Luckenbach, No. 129 Broad str
York City, Ocean and Harbor Transportation;
Co., No. 66 Broad street, New York City, ship ow
agents; Barber & Co., Produce Exchange, st
agents, New York City; Norton Line of Steamers
can African Line, American Indian Line, Norton
agents, Produce Exchange, New York City; Prir
James Knott, managing director, H. P. S.; Richa
ney, shipping agent, No. 111 Water street, New Yo
Bennett, Walsh & Co., steamship agents, No. 18
way, New York City; New York and Porto Rico
ship Company, Miller, Bull & Knowlton, agents,
Pearl street, New York City; Simpson, Spence &
steamship agents, No. 11 Broadway, New Yor
Charles P. Sumner & Co., Sumner Line, No. 18 Br
New York City; New York and Haiti Packet Li
& Co., agents, Produce Exchange, New York Cit
Dearborn, ship broker, No. 22 Beaver street, N
City; Hamburg-American Line, C. P. Oswald,
manager freight department; Holland-America
W. H. Vanden Toorn, general agent; A. E. Out
Quebec Steamship Company, Bermuda and West
United States Shipping Company, Punch, Edy
steamship agents, Produce Exchange, New York
G. S. McIntosh; Bowring & Archibald, Red Cr
No. 18 Broadway, New York City, by Geo. M.
Tweedie; The Tweedie Trading Company, Geo. M
Tweedie, Produce Exchange, New York; Old
Steamboat Company, "Fall River Line," by S.

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NEW YORK, *January 31, 1898.*

Senate of the United States:

ereas the International Dry Dock and Construction Company, of York, has made a proposition to the Navy Department at Wash-, offering in consideration of a fixed sum annually to furnish ate facilities for the dry docking of the United States naval ves- t the port of New York; and

ereas, we, the undersigned business firms of New York, actively ed in the industry of docking and repairing ships, know that the nt docking facilities are inadequate for the accommodation of the vessels of the United States Navy and naval reserve and mer- e steamship fleet constantly patronizing this port, and that such can not be docked at New York, and in view of the fact that all ng facilities at this port exceeding 2,000 tons capacity are abso- controlled by one syndicate, which monopolizes the business of ng and repairing all vessels exceeding 2,000 tons register, thus icapping and seriously injuring our business and also injuring the nerce of New York:

erefore, we fully indorse the above-mentioned proposition, and ctfully petition your honorable body to grant to the Secretary of Navy the authority asked in order that adequate docking facilities arge ships may be provided at this port at the earliest possible ent.

Columbia Engineering Works, D. & J. McNeil; Dumbarton Iron Works, Reid & Duff; The People's Iron Works, Philip H. Gill; Porter & Edgett Iron Works, Brooklyn, N. Y.; Morse Iron Works Co., E. P. Morse, president.

e above subscribers represent about per cent of the business erns actively engaged in the industry of repairing iron ships at port of New York.

APPENDIX B.

OSAL OF THE INTERNATIONAL DRY DOCK AND CONSTRUCTION COMPANY.

WASHINGTON, D. C., *March 29, 1898.*

EUGENE HALE,
Chairman Committee on Naval Affairs,
United States Senate, Washington, D. C.

: Availing myself of the privilege granted by your committee, I submit the following proposition of the International Dry Dock Construction Company of New York City, in accordance with and ssed in the amendment offered by Senator Platt, of New York, for rpose of providing additional dry-docking facilities for the larger of the United States Navy at the port of New York:

company proposes, at its own risk and expense, to construct, te, and maintain at the port of New York a steel floating dry of the Clark and Stanfield model, of sufficient capacity and equip- to properly and safely dry dock the largest and heaviest ships of United State Navy now afloat or building. Dimensions of dock to follows: Main part to be 500 feet, with additional sections, to make al length of about 750 feet; 100 feet wide in the clear inside of s; normal draft of water to be 30 feet over the keel blocks; in ome cases to be 33 feet. We also propose to have and maintain

adequate water-front privileges, with piers, slips, repair shops, tools, and all the necessities of a complete plant for the quick and economical repairing of ships.

We offer the United States Government the services of such a dry dock and repairing plant for one hundred days out of each year for a period of twenty years, with the privilege of the extension of this period; our company to furnish all labor and defray all expenses incurred in the dry docking and undocking of Government vessels. The Government, under proposed contract, shall always have the privilege and right to furnish Government mechanics and material required to make repairs to Government vessels while upon proposed dry dock.

The conditions of proposed contract shall be that our company be paid by the Government such a sum of money per year for above-specified services as may be agreed upon between the Navy Department and our company; this sum not, however, to exceed $90,000 per annum.

In the event of war, or emergency, the Government shall have the use of this dry dock and plant beyond the period of one hundred days per annum if the Government deem it necessary, the compensation for such additional service to be fixed as specified in proposed amendment.

We will contract with the Government that such dry dock shall be provided within one year from date of contract and that the service shall be, and continue to be, proper and efficient for the safe dry docking of any ship up to 15,000 tons displacement, and not exceeding 94 feet beam and 30 feet draft of water.

If at any time during the period of contract the service shall cease to be in accordance with conditions thereof, then the contract shall become null and void, and the Government shall be under no further obligation to our company.

As to the type and kind of dry dock proposed, we have to say that in our judgment the floating dock of Clark & Stanfield model promises the best and surest results, considered from the standpoints of first cost and time of construction, cost of operation and maintenance, rapidity of service, scope of usefulness, durability, and possibility of transit from place to place. And in view of the fact that under the proposed contract we would be obliged to spend all the money necessary, assume the entire risk, and absolutely provide the service required before our company would be entitled to any remuneration from the Government, we can not incur this heavy outlay, approximating a million and a half of dollars in all, in experimenting with new and untried models. We beg to call the committee's attention to the indorsement of this particular model of dock by a board specially appointed by the Navy Department to investigate and report upon the subject of dry docks. We believe the Secretary of the Navy in his last message to Congress indorsed the recommendations of said board.

Opponents of the proposed amendment have asserted before your honorable committee that the Government does not need any additional dry docks for the few large vessels on the Atlantic coast. We differ with them, but do not care to burden this communication with lengthy arguments, believing that Congress and the Navy Department are fully aware of the great need of proper docking facilities, so long as a navy must be maintained.

Dealing with the condition at New York, and anticipating a considerable increase in the number of large naval vessels, it must be conceded that, in the event of war, this great port and labor center would be found sadly lacking in dry docks, as two or three badly crippled

ıips in that neighborhood would tie up all the existing large docks for eeks or perhaps months. In such an emergency the services of a good ıxiliary dry dock and plant would be worth to the Government many mes the maximum amount of money contemplated in our proposition.

We beg to say that the precedent of governments' encouraging the ıtablishment and maintenance of dry docks by private concerns is ell established by the British Government. The large dry dock at alifax, Nova Scotia, receives $30,000 per year from the English Gov-nment, and many other of her docks are treated in the same way.

It has been claimed that we could not render satisfactory service. Ve want to say that immediately upon the service becoming unsatis-ıctory the Government would at once cease to be under any obliga-ıons to our company.

We beg to call the attention of the committee to petitions herewith nclosed, signed by over 90 per cent of the entire shipping interests of he port of New York and about 80 per cent of the firms actively engaged in the business of docking and repairing ships at our port, certifying that proper docking facilities do not exist at New York, fully indorsing our proposition and begging your honorable body to accept our propo-sition that these necessary facilities may be provided at New York with the least possible delay.

As to opposition from Newport News, we desire to say that our propo-sition does not conflict with the interests of that port in any way, as we are dealing entirely with the situation at the port of New York.

We beg to call the attention of the committee to the fact that our proposition embodies the provision of a steel floating dry dock that may be carried from point to point, and always, in fact, be an auxiliary to the naval plant stationed at New York; and that we can provide this means of dry docking heavy ships in 50 per cent less time than any other proposition under consideration, and that even the maximum sum contemplated would be nearly 50 per cent less than the Government would be obliged to pay if it received one hundred days' actual service of a dry dock for a 10,000-ton ship, at rates now fixed by dry docks on the Atlantic coast. The rates fixed at New York for mercantile ships above 2,000 tons register are 16 cents per registered ton for each and every day except holidays. A 10,000-ton ship at this rate would cost $1,600 per day, or $160,000 for one hundred days. The rates at Halifax, Nova Scotia, are about the same, and vary only slightly at any point on the Atlantic coast.

In conclusion, we submit that our proposition does not contemplate that the Government shall pay any exorbitant rates for dry dockage, nor be bound in any way whatever as to who shall do the repairs necessary on ships while in dry dock. We simply propose to furnish, with the greatest possible dispatch, the much-needed facilities for dry dock-ing; offer to deliver reliable service for a reasonable amount of compen-sation, such as the Navy Department agrees with us is fair and rea-sonable.

Trusting that this will receive the favorable consideration of your honorable committee,

I am, very respectfully,

WALLACE DOWNEY,
President International Dry Dock and Construction Company.

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SUBMARINE BOAT HOLLAND.

IL 7, 1898.—Referred to the Committee on Naval Affairs, to accompany Mr. STEWART's amendment to H. R. 9378, and ordered to be printed.

Mr. STEWART presented the following

TER FROM THE SECRETARY OF THE JOHN P. HOLLAND TOR-EDO-BOAT COMPANY, OF NEW YORK, TRANSMITTING A COPY THE REPORT OF LIEUT. NATHAN SARGENT, UNITED STATES AVY, ON THE PERFORMANCE OF THE HOLLAND, A SUBMARINE OAT BUILT BY THE COMPANY.

THE JOHN P. HOLLAND TORPEDO-BOAT COMPANY,
New York, April 6, 1898.

EAR SIR: We hand you a copy of the report of Lieut. Nathan Sar-, United States Navy, on the performance of the *Holland*, a sub-ne boat built at our expense and embodying the inventor's own s of what is the most powerful and efficient war vessel of this type.

is boat has been built, under the supervision of Mr. Holland, by Crescent Ship Building Company, of Elizabethport, N. J., Lewis n, manager, and also that of Lieut. Commander W. W. Kimball, ed States Navy, now commanding our torpedo flotilla at Key West, She is armed as recommended by Lieutenant-Commander Kimball. minor details are now remedied, and the "ultimate success" pre-d by Lieutenant Sargent is accomplished.

is boat has a radius of action of 1,000 miles, and, by filling her r tanks with oil, the radius of action will be increased to 2,000 miles.

e great value of this boat, with its aerial-torpedo guns, in case of ttack upon the land fortifications of Havana, has been reported upon ieutenant Kimball to the Department within the past few days. can go within 200 yards of these batteries, and can not be hit, e she can be delivering her fire of 100 pounds of dynamite at each d from the aerial-torpedo guns.

e fleet can remain out of range and out of danger till the sub-ne boat reduces the batteries, when the marines can be landed and ession taken of the same.

e are advised that the Chief of the Bureau of Construction and ir has recommended the purchase of the *Holland*. We will offer o the Department early next week.

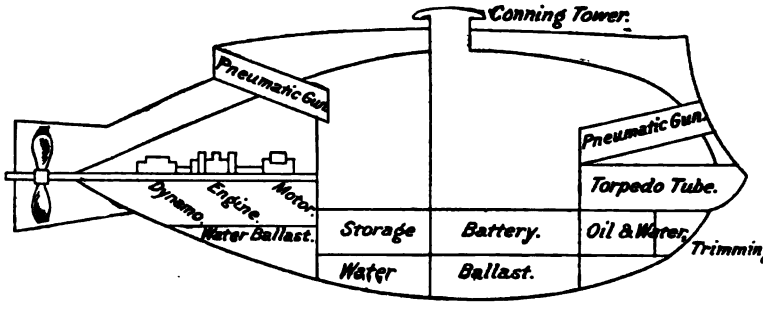
Very truly, yours, E. B. FROST,
Secretary of the Holland Torpedo Boat Company.

n. WM. M. STEWART,
United States Senate.

BOARD ON AUXILIARY VESSELS,
ARMY BUILDING, 39 WHITEHALL STREET,
New York, March 28, 1

SIR: In obedience to your order of the 26th instant, I have the to make the following report upon the condition of the Hollan marine torpedo boat, at Perth Amboy, N. J.

The Holland boat has been so often described that I shall onl pitulate such features as will be of interest to this report. The ing rough sketch of the boat shows her general interior arrange



From which it will be seen that she has two pneumatic guns a torpedo tube, three tanks for water ballast, a gasoline engine (and a tank for storing gasoline, and that she has a dynamo and st battery.

The pneumatic guns are fired with a powder-and-air, or air charge. They are both mounted in a fixed position, and are of 8⅝ i diameter. The forward gun is 11 feet and the after 17½ feet long. torpedo tube is of the usual service type for an 18-inch Whitehea

The water tanks can be seen in the sketch. Water is admitte Kingston valves and ejected by air pressure.

The engine is of the Otto gasoline type, is of 45 horsepower, functions very well. It can be started by a hand pump or prefe by the dynamo (run by the storage battery), and requires but five utes to get underway. A tank of 5 tons capacity furnishes a su of fuel for this engine. The dynamo is used to charge the storage tery, which is 15 feet by 6 feet by 3 feet in dimensions, and furni 50 horsepower for six hours, or 150 horsepower for two hours. storage battery requires some ten to twelve hours for charging, with present engine of limited horsepower, can only be charged the boat is at rest. It is said that, starting with the battery charged, the boat can be run 50 miles.

There are two pumps for air compression and several receivers, connected with pipes having a reducing valve to bring down pres to that required for operating the steering and diving gear. T work satisfactorily, with the exception of a leak in one of the redu valves, which prevented the obtaining of a higher pressure than pounds.

There is a hydrostatic pendulum arrangement, similar to that o Whitehead torpedo, for maintaining the boat at a constant depth b the surface, but this is not fully in order. There is also an auton rudder for keeping the boat on a straight course when submerged. has not yet been fully adjusted.

steering and diving rudders are both double and are worked by ressed air.

Holland boat is substantially finished and in working order, but there veral minor details, in addition to those already mentioned, yet to be ted before the boat can be considered as ready for service. These incipally in the matter of adjustment of the different parts and tenances, and should not take over two or three weeks, provided he experiments with the boat are systematically carried on.

t is at all the intention of the Department to utilize this boat it l be greatly in the interest of the Government that some young , or a young gunner who has passed through the torpedo and ical courses, should be ordered to duty with the boat. In that the officer could readily become conversant with the vessel, its anism, and its peculiarities, and he could also see that experiments her were progressively and regularly carried on. There would be h greater chance of the ultimate success of the boat if some such were adopted than is the case at present.

ve the boat a thorough inspection, and as I have remarked above, her in good working condition. The engine, dynamo, air com- rs, etc., all worked satisfactorily, both alongside the dock and when way, and the boat dove and came up readily in answer to the action horizontal rudders, but her steering qualities were not as good as should be, she being sluggish in response to her helm, and describ- much larger turning circle than should be the case in a boat of ize and model. This fault is ascribed to a protection piece on the ver the screw, and the designer is confident that by changing the of this protection piece the difficulty can be overcome.

derway the boat made some 6 knots when immersed to the point ving her upper deck level with the surface of the water. She dove different times to depths varying from 10 to 18 feet, remaining r water but a few seconds—sufficient to run about 200 yards. This tness of run was due entirely, however, to the confined space in the nel between Perth Amboy and Staten Island, the channel being so ow that no longer run could be made without danger of grounding e mud. With the large supply of compressed air provided in the there is nothing to prevent her remaining under the water for a run of several miles, but to carry out such an experiment it will be ssary to try her in some open water when there is sufficient depth iving and no danger of obstruction by vessels.

these experiments the boat fully proved her ability to propel herself, ve, come up, admit water to her ballast tanks, and to eject it again ut difficulty.

e forward pneumatic gun was then tried with air pressure only, the owder cartridges which are used in connection with the air pres- not having yet arrived. The gun was loaded with a wooden project- feet long by 8½ diameter, and was fired with 600 pounds pressure. projectile was thrown some 400 yards without any divergence from ine of fire. The boat appears to be strongly constructed, and, con- ing all that she contains, is much more conveniently arranged than ld be deemed possible.

any improvements might be made in another boat which would add e efficiency of the craft and lessen her complexity, the most salient ese being an increase of the horsepower of the gas engine to le its present power, a suppression of one of the pneumatic guns

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Mr. Holland says:

This boat contains the highest type of machinery and warlike implements known present boat will carry three Whitehead torpedoes, a dozen projectiles for the torpedo thrower, each containing 100-pound charges, with a range over the w 1,800 yards.

With this boat we can bombard a fort, whose guns will be helpless to retu for the boat can not be seen. With it we can enter any harbor, regardless pedoes or obstructions, and blow away every impediment in its path. Havana be reached and bombarded in spite of the Spanish fleet.

The first and greatest desideratum in a submarine boat is simplicity. Eac has one thing to do and nothing else. The crew will consist of one pilot, one " tor" or assistant pilot, one electrician, one engineer, and two torpedo experts men can run this boat under any fleet of war ships, in any harbor, attack an on land or sea, and at the same time disappear after each discharge of gun always be out of reach of the enemy's fire. There is very much less dang submarine boat of this kind than on any surface boat.

When our boat goes to sea for business, she will carry one aerial torpedo th one submarine gun, one Whitehead expulsion tube. Even when in action the be no great inconvenience from recoil or the explosion. The indicators will exactly where we are. If we approach land, a little bell rings the warning. be exactly like riding in a well-lighted, comfortably seated railway car thr tunnel.

I consider that there is nothing problematic about this system of submarin fare. Every point has been demonstrated.

The difference between a boat of this type and an ordinary torpedo boat, sails on the surface, is beyond words to express. In rough weather, life on a t boat is horrible. After a rough trip the crew have to be sent to a hospital fo ment. In a gale such a boat could not live. We are indifferent to storms. accompany a fleet of the biggest war ships in the wildest sea. Besides the q for the crew, we have a cabin 15 by 10 feet for the accommodation of exp visitors who may accompany us. The temperature in the engine rooms of ra torpedo boats is almost insupportable. We shall be perfectly cool, having t perature of the sea surrounding the boat. While ships are covered with i deep in the sea, will be as comfortable as by our firesides at home. The bo not be in danger of sinking, as she is always sunk. She can not leak, becau double bottom is always filled with water for ballast.

If I had a contract to attack Havana, I would skim the bottom of Havan rise to the surface, and, with the camera obscura, see on a sheet of paper befo picture of the harbor with its shipping. I would ram holes in the ordinary w and blow up the armored vessels. If I did not wish to sink them I would aerial torpedo guns and cave in the decks, then practice on the forts at my l The power of these weapons is enormous. The muzzle energy of the submari

Here is what Hon. B. F. Tracy, Secretary of the Navy, said about e Holland submarine boat when the subject was under consideration Congress in 1893:

NAVY DEPARTMENT,
Washington, February 7, 1893.

IR: Referring to your communication of the 17th ultimo, inclosing plans and cifications of an armored semisubmarine boat, together with a bill (H. R. 7214), l requesting an opinion of the Department on same, I have the honor to state that matter having been referred to the Bureau of Ordnance, that Bureau, on January 1893, reported as follows:

The system proposed by the accompanying plans possesses features which, if veloped, would provide *a powerful auxiliary for purposes of coast defense.*

The practical value of the aerial torpedo in connection with the pneumatic gun stem should *be definitely* determined by the trials of the *Vesuvius* now in progress, ile the tests of the submarine gun on the *Destroyer*, already made, with others in templation, will enable the Department to determine the practical value of that stem.

Should neither of these systems prove *entirely* satisfactory, *an armament* of automo- e *torpedoes would make the proposed vessel a powerful antagonist.*

The *development* of *the most promising* of the proposed systems of submarine war- e, *of which this is one, should*, in the opinion of this Bureau, *be undertaken, as by it owerful addition to the defensive armament could be provided at a moderate expense.*

The Department concurs in the above report of the Bureau.

Very respectfully,
B. F. TRACY,
Secretary of the Navy.

Hon. H. A. HERBERT,
Chairman Committee on Naval Affairs, House of Representatives.

And here is what Commodore Hichborn, Chief of the Bureau of Con- ruction and Repair, said at the same time:

Even though this vessel be not a perfect success, she may mean to future fighting ips and methods of naval warfare what the much-doubted *Monitor* has proved to r present Navy.

Here is what Lieut. Commander W. W. Kimball, U. S. N., now com- anding the torpedo fleet at Key West, said to the Committee on Naval ffairs of the Senate two years ago (1896):

Give me six Holland submarine boats, the officers and crews to be selected by me, nd I will pledge my life to stand off the entire British flying squadron 10 miles om Sandy Hook without any aid from our fleet.

Rear-Admiral Jouett said to the committee at the same time:

If I commanded a squadron that was blockading a port and the enemy had half a ozen of these Holland submarine boats I would be compelled to abandon the lockade and put to sea to avoid destruction of my ships from an invisible source, nd from which I could not defend myself.

Here is what Lewis Nixon, manager of the Crescent Shipyard, and ho while an officer of the Navy designed the battle ships *Indiana* and *Massachusetts*, said to the committee:

I strongly urge the adoption of the submarine-boat amendment. The value to a tion of a type of boat carrying within it such destructive power, and being of itself vulnerable, if they can be built in so short a time, is so great that a fleet of such boats ould be added to our Navy without delay, in order that the necessary experience ay be had in their handling. Torpedo chasers take a long time to build, and in e event of war within the next few years the few we might turn out would be eatly outnumbered by vessels of a similar type sent against us. But for defense be obtained quickly and at a comparatively slight expense I should recommend a mber of submarine boats embodying the Holland patents.

Capt. A. T. Mahan, the distinguished tactician and author of The ffect of Sea Power on History, wrote to Hon. J. D. Cameron, chair- an of the Committee on Naval Affairs, at the same time that Admiral uett and Lieutenant-Commander Kimball appeared before that com- ittee and urgently recommended the building of six of the Holland bmarine boats, and stated that they would be "a decisive factor in fending our coasts."

The following was written by Lieut. Commander [illegible] U. S. N., now commanding torpedo-boat flotilla at Key West

Tactical Value of Submarine Boats.

In arriving at an opinion as to the tactical value of these vessels, thei and capabilities should be carefully considered, and the order of their fulness determined as nearly as may be with no results of their use in in reaching a determination.

Taking into consideration their peculiar qualities as fighting machin seem that they would prove most effective:

First. In holding the first line of coast defense, i. e., a line just out barding range.

Second. In harassing and, if opportunity offered, in sinking blockadin thus preventing a close blockade of any port defended by them.

Third. In holding channels and narrow waters against a fleet attempti

Fourth. In carrying communications through hostile lines.

Fifth. In fleet operations in company with ships in or off shore.

Sixth. In the clearing away of torpedo mine fields and other marine c

Seventh. In the reducing of a place defended by armored ships, t fields, marine obstructions, torpedo boats, dirigible torpedoes, torped and shore works located within moderate range of at least 4 fathoms of

In this paper the boats considered will be assumed to possess only endurance, and radius of action of the one now building for the Navy, a ance will be made for the probable increase of these in the near future. these are—

Speed, surface, 16 knots.
Speed, submerged, 8 knots.
Radius of action, surface, 1,000 miles.
Radius of action, submerged, 60 miles.

But in armament there will be assumed a change from the twin torp the present boat to a fixed torpedo tube in the axis forward, an elevs tube or pneumatic gun aft, and an elevated pneumatic gun installed abo torpedo tube forward. This last gun might be omitted for the first fi tioned above, but would be very necessary for effective work in the l would be useful in all.

The method of driving home an attack on a ship would be the same where the depth of water was sufficient for the boat to pass under h would be as follows: As the boat and ship drew together under any of th hereafter treated, and the fire of the latter grew hot, the boat would d light to the awash conditions, and thus present but a small target for could well sustain a few shot through her smokestack, since there is am

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e, dive, and make a run at five fathoms below the surface of about 500 yards, hen rise till the top of her turret or that of her camera-lucida tube above water a view of the enemy and the consequent direction for the next submerged run. ing such an approach the ship's torpedoes would be useless, because the boat ents too small an object for torpedo practice, because her torpedoes, if adjusted use against surface vessels, would pass harmlessly over the boat when she was at running depth, and because their chance of striking while the boat was rising diving is too small to consider, even if her course could be followed from the ship th sufficient accuracy for laying the torpedo tubes, which last would not be possible. Gun fire would be employed against her, but the chances of its proving effective e hardly worth considering, when it is remembered that she would present as a rget only a few square inches of armored turret or the top of her camera-lucida ube for a few seconds at a time in unexpected and impossible-to-predict places. A ry lucky plunging shot from a battle ship's top, delivered just as the boat rose, ould be effective, but it is to be remembered that the swaying of a ship's top in a away makes any fire from aloft inaccurate, and that a plunging shot has absoitely no danger space; i. e., the shot must go directly home, with no chance for a it, due to the fact that it is flying nearly parallel to the surface of the water above hich the object stands in the case of gun practice against ordinary vessels. The nall chance of disaster due to gun fire would certainly not be enough to deter, when caping it would mean the defeat of 500 men in an expensive battle ship by five men an inexpensive boat.

When the boat arrived within 300 yards of the ship she would make her final dive, liver her bow torpedo from her axial tube, pass under the ship if her direction are good enough—and at such close quarters she could hardly miss—and as the ht through the water gave notice that the ship were passed, the stern torpedo ould be delivered against the ship's hull well down to her bilges. The attack uld always be avoided by the ship's steaming away at speed, for the boat could t chase submerged for any length of time faster than 8 or 9 knots, though she uld make short runs at 12; but if the boat chased the ship away she could be conlered to have given a good account of herself.

If the commander of the ship, in view of the futility of his gun and torpedo work, ould resort to the desperate expedient of attempting to ram the boat, he would atly aid the latter; for she could reach a safe depth below the keel while the p were moving a length, and thus gain the best possible position for delivering a t from the stern tube.

ince the chief duty of the boat is to get into the course of the ship, it is evident t ramming tactics would only help the boat to make her attack easy and effec-; for the most difficult thing she has to do is to get under the ship, since there bsolutely no lookout ahead when running submerged, and consequently no cer-indication that she is going right until the dense darkness, followed by a murky t, shows that she has crossed the ship's course.

HOLDING THE FIRST LINE OF COAST DEFENSE.

e length of the line that it would be desirable to hold off any coast town would, urse, depend upon the length of the front determined by the contours of the t line, outside the zone held by shore defenses and inside bombarding range, g which a hostile fleet could operate.

e length of line that it would be possible to hold would depend upon the numf boats available, stationed at practicable intervals from each other.

e greater the number of boats the farther out could a continuous line be car-; the fewer the boats the nearer in if continuous, or the shorter, if carried out, ld be the line.

ving determined the front along which a hostile fleet could deliver an effective the boats should be stationed on it and arranged to meet the most probable ements of the enemy.

ainst a place provided with any serious defenses, and especially against a place nded by submarine boats, the most effective way for a fleet to operate is the -known one of "circling," i. e., steaming past the point of attack at speed in mn of vessels, the leader hauling out of range after her fire is delivered and ling back to renew the attack, and her motions being followed by the other ships ccession.

he chief reason that makes this method a favorite one among tacticians is that it bles the attack to be made at speed, and therefore renders the ships quickly movtargets, while it does not prevent that most difficult thing to attain in naval fare, an exact knowledge of the range, and a consequent accuracy of fire, because range can be determined and the guns laid beforehand and the fire accurately ered when the sights are brought on by the ship's reaching her predetermined g position.

To meet such an attack the submarine boat flotilla should anchor along barding line at intervals depending on its strength, and lie there in the awash conditions with smokestacks up and steam ready in all weathers in hostile fleet could make efficient gun practice, receiving reliefs of crews plies of fuel and other stores as might be necessary from a fast tender, p of the torpedo destroyer type.

Although the general principle that "the closer the interval the stronge held" applies to submarine boats, it is to be borne in mind that dissemin them does not have the obvious features of bad tactics that it has for su sels, which when scattered offer the enemy opportunities for concentrat weak points and defeating the whole force in detail; for the greater the n ships that would concentrate upon a single unsupported submarine boat t would be her chance of striking home from below the surface.

Under the conditions outlined above the duty of the submarine boats wo follows, supposing, as is most probable, that the hostile fleet reaches the line at one extremity standing in in column of vessels:

The boat nearest the approaching fleet would, as soon as the enemy w out—and it is to be observed that she could make out the fighting tops o ship on the horizon much easier than the ship's lookout could locate her— smokestack, sink to the awash condition, and await the approach of the light torpedo destroyers were sent on ahead she would haul below the surf ing only her camera-lucida tube above water. In this position she woul a target almost impossible for the oncoming light-ship to strike with a but in case the enemy's torpedo practice were considered dangerous she w have to haul down below the plane of the torpedoes' path to be out of dan she could readily do in order to hold her position in the course of the ap ships, rising to the surface for a few seconds now and again, to watch th of affairs.

The other boats would observe the direction of approach of the hostil and if it coincided nearly with their own line they would hold their positi same way as did the first boat.

If the direction of approach was outside or inside the line they were o each boat independently would weigh and steam slowly, in the awash co a direction at right angles to this line, so as to place herself in the cou approaching ships, and then douse smokestack, seal up, and keep only the turret above water. The one paramount duty of each boat acting indepe her consorts would be to place herself in the course of the approaching sh pedoes could not drive such boats from their stations, gun fire would be u the admiral who would take his fleet along such a line for the sake of b a town would do so only under the demand of most desperate conditions, have to endure the enormous strain due to the moral effect of well-known l danger.

But suppose such chances were accepted by the enemy. The first boat w till the leading ship closed to 1,500 yards, and deliver the attack as before As soon as her attack was delivered and her torpedo tubes reloaded, the b raise her turret top or lucida tube above water, select the nearest antag drive home her attack as before. All the ships that escaped the attacks o boat would have to receive those of the other boats in line or haul out of expedient that would increase in attractiveness with the number of bo driven home. Under such conditions the attempted bombardment of the town would be quite harmless for defenders and exceedingly expensive for t ing force.

In case the attacking fleet abandoned the range advantages of the circli and charged straight up in line, each boat would select her ship and st torpedo work, as in the last case. Ships that passed the line of boats wo lowed inshore, and the chances of their ever being able to haul off would l the number of boats was equal to that of the ships.

IN BREAKING A CLOSE BLOCKADE

it is apparent that if blockading ships can be forced sufficiently far offsh ade runners can evade the fleet and enter or leave the invested port.

In order to most effectively break a blockade the number of subma should be equal to the number of ships. The tactics would be extreme since the only point for the commanders of the different boats to bear in m be for each to sight the ship he was detailed to follow and stick to her un at least 15, and at most 20, miles offshore.

These distances would be sufficient for the escape or entry at night of chant blockade runners, or for what might be vastly more important, the fi fleet shut up by a superior force; for what fleet the defenders had coul

ully employed in striking the enemy's weak points—concentrating on his exposed ks, demonstrating against his base, or cutting off his line of supplies, for tance.

Again, these distances are determined by the submerged radius of action of the ats, since they might have to work in the sealed-up condition for the whole time ey were forcing the blockaders back; certainly would, if, as may well be supposed, e enemy's admiral protected his ships with accompanying fast torpedo destroyers, d was cool enough to stand off at a speed only a little in excess of that of the boats nning submerged, and would thus compel them to be always ready to render futile a torpedo and gun work, and to drive home an attack.

If at 15 miles from the bombarding line the ships doubled back and steamed in at eed, the 20-knot ships would arrive there fifteen minutes before the boats; and though it would only be the enemy's fast cruisers that could accomplish this, it uld not be prudent to give them more time there, unless there were reserve sub-rine boats left behind to receive them.

Sixteen-knot battle ships alone could be forced farther off the coast; for if they bled back the boats would up stacks, light fires, and follow them in, arriving on bombarding line in time to prevent any effective work at bombarding range.

OLDING CHANNELS AND NARROW WATERS AGAINST A FLEET ATTEMPTING TO ENTER.

this case the duty of the boats would be practically the same as holding the bardiug line. But the line would be shorter and therefore more easily held, boats intended for this purpose alone could be smaller than those that had out-work to do. Since their radii of action would be short, they would need steam her for covering distance nor for renewing their electric batteries, as these last d well depend upon a shore base. In fact, boats for this purpose could be made nall and of much the same general type as the Goubet boats now built in France, l enough for convenient transport by rail. If the channel to be defended were hallow to allow the ships to pass over the boats, these last would have to avoid ble ramming by heading out all the time, and then avoiding the advancing s ram and propellers by a little use of the helm. Under such conditions it d be almost impossible for the ship to strike with her ram, while the attempt so would give the boat an excellent chance for getting home her torpedoes.

CARRYING COMMUNICATIONS THROUGH HOSTILE LINES.

is would be an extremely simple matter, for the only thing the boat would have would be to avoid being seen by making long submerged runs.

it were necessary to communicate in daylight, it would be well for the boat to up to about three or four miles of the ships with only her camera lucida tube water, then dive and run 15 or 20 miles on a compass course, at the end of which ould rise, get a look around, and if there were no fast hostile ships in sight, oke stack, light fires, and steam to her destination, anywhere within a thou-miles. If on rising she made out a torpedo destroyer she would again dive and fteen miles in a direction at right angles to the one she had come out on, and probably avoid any ship sent to look for her. If the circumstances were at all able she would stop pursuit by sinking the pursuing ship.

case the enemy had a very great number of fast craft that he could spare to for her, and in case the necessity for communication were so great that she could pend time to attack pursuing ships, it would be better for her to run out at , when her under-water run would need to be only long enough for her to pass le the range of the enemy's search lights. As soon as she passed them she l up stack and steam on her way.

IN COMPANY WITH SHIPS IN OR OFF SHORE.

ng to their capability of taking the sea over all, they could, when running keep position with a fleet better than can the ordinary surface boats; they be easier in their motions, and in that respect less fatiguing to their crews.

h supplies of oil, fuel drawn from the ships as required, and with necessary of crews, these boats could be relied on to accompany the fleet in any offshore when surface torpedo boats could be expected to keep company.

m, in a general engagement, a torpedo attack were desired, the submarines be confidently sent in from the shelter of the fighting ships, for they would othing to fear from the fire of hostile guns, since they would have effective cover when running with their camera-lucida tubes only above the surface; uld their movements cause a slackening of fire from ships of their own fleet

be learned, or if for any other reasons these could not be dragged for, a within the submarine's pneumatic gun range of the mines would be select the observing ships and the boat sent in to occupy it by running awash. on the predetermined position the boat would practice on the mine field b aerial torpedoes. Since pneumatic guns are very accurate when the range is it would seem that from a predetermined position the aerial torpedoes w delivered in the mine field when the guns were pointed by merely heading t on a compass bearing, and that therefore the fire would be effective in ex the mines.

The boat might anchor on her position and rise to the surface to deliver a s then haul below the surface. The chance of putting her out of action by th any mine-covering batteries would be very small, for the target to strik consist of a few inches of armored turret exposed for a few seconds.

Booms and floating obstructions of all kinds, with their moorings, could be a in the same way with good chance of success, and if, as would be probable, th were defended by mines, it would be more effective than in any other way. obstructions in a channel would be located by a submarine boat feeling up t and then attacked by torpedoes.

Such an attack would smash up hulks and perhaps with the aid of tidal clear the channel.

Well-placed, unfloatable, sunken obstructions of sufficient bulk can not moved by torpedo work or in any other way short of regular mining and d operations that can be carried on free of hostile interruptions.

THE REDUCTION OF A PLACE DEFENDED BY ARMORED SHIPS, TORPEDO-MINE MARINE OBSTRUCTIONS, TORPEDO BOATS, DIRIGIBLE TORPEDOES, TORPED TERIES, AND SHORE WORKS WITHIN MODERATE RANGE OF AT LEAST FOUR F OF WATER.

As in other cases cited, the usefulness of submarine boats for this purpo to the fact that they can in the covered or submerged conditions effectively in a zone of fire untenable to anything but the best of armored ships, and operating evade instead of receiving hostile fire.

Against armored ships assisting in the defense of a place and outside the t mine field and marine obstructions, the submarines would attack as h described for attacks on ships, except that if the ships hauled inshore in water so that the boats could not pass under them, the torpedoes would ha delivered from the bow tube alone and the attack renewed until it was e On the other hand, the ships, being inshore and having to stick to their de stations, would consequently be deprived of their chance of avoiding attack b ing offshore at speed, as could blockading vessels.

If the ships were inside, and the contact makers of the torpedo-mine d

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well be chanced, though these would be very dangerous to submarines if a
er of torpedoes were fired at once—set to run at depths varying from 2 fathoms
greatest depth of water in front of the battery—and if the running past by
bmarines were attempted in the daytime, when their motions might be made
om commanding lookouts.
l-placed and bulky sunken obstructions, which would seal the port to friend
e alike, would of course prevent the entrance of submarines.

CONCLUSIONS.

m all the above it will appear that submarine boats owe their capability
efulness to the fact that they can take cover in water as shore forces can in
; that when so covered they have under certain conditions an offensive power
an not be neglected; that until their exact powers are gauged by experience
would accomplish much by affecting the morale of the enemy; that although
ave a wide field of usefulness, they do not fill the places of battle ships, cruis-
fast torpedo vessels, and that they are especially needful to a country weak
nbers of armored ships when opposed by a strong naval power.
is true of submarine boats of offensive, defensive, and maneuvering powers
an be built to-day; but if their development in power parallels that of other
ng machines, their field of usefulness will greatly widen.

DOES NOT CIRCULATE

5TH CONGRESS, 2d Session. | SENATE. | DOCUMENT No. 227.

THE CURRENCY QUESTION.

APRIL 7, 1898.—Ordered to be printed.

Mr. PETTIGREW presented the following

OMMUNICATION FROM MR. CHARLES A. TOWNE, PUBLISHED IN THE POST-INTELLIGENCER, OF SEATTLE, WASH., RELATIVE TO THE CURRENCY QUESTION.

R. TOWNE IN ANSWER TO THE QUESTIONS ASKED BY THE EDITOR OF THE POST-INTELLIGENCER.

SEATTLE, *March 17, 1898.*

o the Editor:

I do not often permit myself the luxury of dispute with a newspaper. he newspaper always has the last word, and, when it is a gold-standard ewspaper, frequently finds an easy descent from the courtesy of honrable discussion to the vile manners of the blackguard. In this last articular your paper is evidently as bad at least as the character of its ause demands. Your statement, in an editorial of this morning, that He (I) willfully misstates facts and perverts history," is a fair sample f the amenities of debate as understood and practiced by your class. ortunately, the demonstration which it clearly affords, viz, that you ck the argument and the ability to meet us bimetallists in fair discusion, is some compensation for the offense which a gentleman instincvely takes at the grossness and insolence of a bully.

I have no confidence that if I had proceeded to comment on each of our observations on myself or my speech, you would give space to the ommunication, therefore, in spite of the temptation of your numerous xhibitions of both ignorance and ill manners, let me come to the quesons propounded by somebody in Oregon, which you say I have not ttempted and will not attempt to answer. I suppose that even you ill have the decency to print my answers after having challenged e to make them. There is no difficulty whatever about the questions, nd I should have been glad to answer them before this if they had appened to come to my attention. Here they are:

1. Are you, Mr. Towne, in favor of the dollar of the smallest purchasing power?
2. Are you glad that in 1897-98 our laboring people have had to pay higher prices han usual in recent years for their flour and beef?
3. If you answer No. 2 affirmatively, explain to our laboring people why you are lad that their dollars have had less purchasing power in flour and beef; why you re glad that their labor buys less than usual of bread and meat?

4. If it has been a good thing for laboring people to pay dearly for their meat and bread, wouldn't it be a still better thing if they were to receive dollars of smallest purchasing power in payment of wages, so they would have to pay still more dearly for bread, meat, clothing, groceries, etc.?

5. If it would be a good thing for day laborers to receive dollars of smallest purchasing power for their work, and pay dearly for the necessaries of life, would it not be a good thing for all wage-earners and salary workers to receive cheapest dollars for their services and pay dearest for everything they wear, eat, or use?

6. Explain to day laborers and wage-earners how there can be a general rise in the average level of labor—namely, the buying power of wages—if we shall decrease the value of the dollar to the lowest purchasing power, and thereby raise the prices of the necessaries and comforts of life to the highest possible point.

7. If you answer No. 2 negatively, Mr. Towne, please explain to farmers why you are not glad that they are receiving good prices for their wheat, cattle, mutton, wool, hay, etc.

ANSWERS.

1. No; I am not in favor of the "dollar of smallest purchasing power," and never claimed to be. The dollar we seek to establish is a dollar that shall approach as near as possible to constancy of purchasing power; that shall mean as nearly as can be the same equivalent of products yesterday, to day, and to-morrow, and not, as the gold standard provides, one that continually increases in purchasing power.

2. I am not in favor of higher prices that result from scarcity of product, and therefore am not glad that our laboring people had to pay higher prices for bread and meat, while having no more money than before to buy with. Please remember that it is you, not I, that is defending the present system, under which the farmer can not get higher prices than for many years past except at the expense of the poor man's necessities, and under which the consumption of wheat has in a few years declined from over 6 bushels per capita to a little over 3 bushels, even at the low prices.

3. As I do not categorically answer No. 2 affirmatively, I am not obliged to answer No. 3 at all, but I have already answered it substantially in answering No 2.

4, 5, and 6. These questions are all founded upon the unwarranted assumption that laborers are benefited by falling prices and by a dollar that constantly calls for more and more of the products of their labor, whereas every member of an organized labor assembly can tell you that when prices are falling money will not engage in enterprise; that when money runs away from productive employment it ceases to employ laborers; that laborers out of a job can not buy products, however low the prices may be; that money seeking investment at making things causes several jobs to seek one laborer, and wages go up; that money idle because falling prices forbid it to be risked means several laborers seeking one job, and wages go down or cease entirely; that labor has always been able, at least for the last generation, since it has been well organized, to secure for itself in increased wages a share of advancing prices; that while by combination labor can prevent to a considerable extent a fall of per diem wages as an accompaniment of falling prices, it is powerless to increase the number of days of work; that statistics of day wages that do not mention the days' work lost are misleading; that if a man's wages are $2 a day and he gets one day's work a week, his wages are really $2 a week; that a laboring man pays debts with his surplus, and even assuming the alleged doubling of his expenses (which we deny, for prices would not double nor anything like it) under bimetallism, he could look with some degree of equanimity upon an account like this: On gold standard: Wages, $1 a day; expenses, 75 cents; surplus, 25

ents; mortgage on little home, $500; number of days' work to pay off ortgage, 2,000. Under bimetallism: Wages, $2 a day; expenses, $1.50; urplus, 50 cents; number of days' work to pay off the mortgage, 1,000; et saving to laborer in paying his mortgage under bimetallism, 1,000 ays' work. The laboring men know, what evidently you do not, that ie established facts, as shown by reliable data (not the partial and octored ones of the Aldrich report, which have been laughed out of ountenance by the competent statistical authority of the world), are iat under bimetallism wages rose in the United States from 1860 to 873 about 53 per cent, and under the gold standard have fallen since 873 so as to leave the net gain over 1860 only 46 per cent, and that very body of organized labor in the world has declared again and gain for the restoration of silver to the money rights of gold.

7. This has been already substantially answered. When you are ble to show that high prices result from having less money you will e able to reconcile your gold standard with agricultural prosperity. Ve seek a money system that will make producers prosperous, or rather hat will permit them to make themselves so, as a normal and regular hing and not as a result of accident. Had it not been for foreign amine and calamity your system would have injured the grower of rheat in 1897 as it has, with almost uninterrupted regularity, injured im since 1873.

But you are bold enough to venture into the catechising business on our own account, and you propound editorially the following questions:

1. Do you believe that, under free and independent coinage of silver at 16 to 1, he parity with gold can be maintained?
2. Assuming that you do, if the United States is thus able to make a 40-cent silver ollar worth 100 cents in gold, what reason is there to prevent exercise of the Government's powers so that a paper dollar, worth a fraction of a cent, may be made rorth 100 cents in gold?
3. If the parity can not be maintained, will the result be otherwise than to fasten he silver standard on the country? Is the silver standard preferable to the gold? Vhat will become of gold if we have the silver standard?
4. If the present gold dollar is a 200-cent dollar, what will the silver dollar be when t is maintained under free coinage at equality with gold?
5. Will free coinage reduce the value of all gold, or more than double the value of ll the silver in the world? If the former, whom will it injure? If the latter, whom will it benefit; the people or the mine owners? How will it increase the purchasing power of the silver dollar, which now passes for a gold dollar?

ANSWERS.

1. To be sure I do.

2. No reason on earth except the practical difficulty of regulating the quantity of the issue. It may be news to you, but there is practically no dissent from the proposition I have just stated among the standard economic authorities of the world. Henry Dunning McLeod, next to Giffen the ablest English champion of your gold standard, says: "There is ideally no difference in principle between a metallic and a paper currency, only one depends upon a wider basis of credit or of acceptance than the other." Said the great Lord Overstone: "In adopting a paper circulation we must unavoidably depend for a maintenance of its due value upon the adoption of a strict and judicious rule for the regulation of its amount." Paulus, the ablest of Justinian's urisconsults, wrote into the Pandects, over twelve centuries ago, the ollowing: "Its (money's) power of acquisition depends not on its substance, but on its quantity." Not to be tedious in multiplying what to ou will seem revelations, unless your mental audacity is such as to

encourage you to insult the greatest names in political science, but which, to men of any information, are commonplaces, I will add only one more citation. It is from Jevons, one of the greatest thinkers of the century, a gold-standard man, in his Money and the Mechanism of Exchange: "There is plenty of evidence to prove that an inconvertible paper money, if carefully limited in quantity, can retain its full value. Such was the case with the Bank of England notes for several years after the suspension of specie payments in 1797, and such is the case with the present notes of the Bank of France." Let me add that the Bank of England now floats about £16,000,000 ($80,000,000) of notes in uncovered paper, not resting on a specie reserve; and the English commission on the Indian currency (Lord Herschel's, 1893) mentions that a few years ago the inconvertible paper of Brazil was for some time at a considerable premium over gold. What do you say to that?

But you speak of "a 40-cent silver dollar." I know of no such dollar; do you? Do you dare to call our present silver dollar a 40-cent dollar? And do you desire to contend, before the common sense of your readers, that to give to silver bullion the right, now denied to it, to go into the mint as bullion and come out as money empowered to pay debts and do business to the extent of billions of dollars a year in this country would not make that bullion worth any more than it is now?

3. The parity can be maintained, as I attempted to show in my speech the other evening. It would not, however, be difficult, if space and leisure permitted, to show, not to you, but to open-minded men, that even assuming what you call "the silver standard" to be established in the United States we should be far more prosperous than we can hereafter be if the gold standard is to continue. Both Giffen and Jevons declared that Germany made a mistake in displacing her silver standard. Bismarck has said the same thing. Contrast the unexampled progress of Mexico and Japan for the last twenty years, on the "silver standard," with the condition of Turkey and Portugal on the gold standard.

4. A 100-cent dollar, of course. Silver bullion will rise and gold bullion will fall, and parity will be reached at 100 cents.

5. My answer to No. 4 answers the greater part of this. Such a consummation would be fair to everybody, both debtor and creditor. Try to get rid of the notion that we want to rob somebody. Association with the gold standard seems to have corrupted you, and you appear unable to assign any but a selfish and cruel motive for the advocacy of an honest money measure. Bear in mind that it is not necessary, in order to maintain parity, that we "double the value of all the silver in the world." Most of such silver is now in circulation as token or limited money and at a valuation from 3 to 7 per cent above the proposed mint relation of 16 to 1. The amount to be acted on by the accelerated demand would be far below the needs of the commerce that to-day mankind would gladly be busy at if only the money they foolishly insist on limiting themselves by were made adequate to their capacities. There is very grave reason to fear that instead of too much silver we should find too little to meet the demand. No, there is no trouble about the parity between gold and silver if our stupendous demand for money is permitted to base itself with equal use and privilege upon both metals.

Now, Mr. Editor, having accepted your invitation, or defiance, whichever you choose to call it, and answered both sets of your questions,

allow me again to ask your attention to the following, which up to date not a gold-standard newspaper has tried to answer:

1. Are you in favor of the dollar of greatest purchasing power?
2. Are you glad that in 1897 certain American farmers received a higher price than usual in many years for their wheat?
3. If you answer No. 2 affirmatively, explain to your readers why you are glad that your dollar in 1897 had less purchasing power in wheat than usual.
4. If it was a good thing that the farmer got a high price for his wheat, would it not have been a still better thing if he could have received higher prices for his hay, corn, oats, cotton, fruit, hops, and other farm products?
5. If it would have been a good thing for the farmer to receive higher prices, would it not have been also a good thing for all other producers to receive higher prices for their products?
6. Explain to your readers how there can be a general rise in the average level of prices without a corresponding increase in the quantity of material—that is, money, in which prices are measured.

CHAS. A. TOWNE.

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55TH CONGRESS, 2d Session. } SENATE. { DOCUMENT No. 228.

IMPROVING MUSKINGUM RIVER, OHIO.

LETTER

FROM

THE SECRETARY OF THE TREASURY,

TRANSMITTING

COPY OF A COMMUNICATION FROM THE SECRETARY OF WAR SUBMITTING AN ESTIMATE OF APPROPRIATION FOR IMPROVING MUSKINGUM RIVER, OHIO.

APRIL 7, 1898.—Referred to the Committee on Appropriations and ordered to be printed.

TREASURY DEPARTMENT,
OFFICE OF THE SECRETARY,
Washington, D. C., April 6, 1898.

SIR: I have the honor to transmit herewith, for the consideration of Congress, copy of a communication from the Secretary of War, of the 5th instant, submitting an estimate of appropriation for improving Muskingum River, Ohio, $6,000.

Respectfully, yours,

L. J. GAGE,
Secretary.

The PRESIDENT OF THE SENATE.

WAR DEPARTMENT,
Washington, April 5, 1898.

SIR: I have the honor to forward herewith, for transmission to Congress, estimate ($6,000) of appropriation for "Improving Muskingum River, Ohio," for repairing and extending the levee at Zanesville, Ohio.

Very respectfully,

R. A. ALGER, *Secretary of War.*

The SECRETARY OF THE TREASURY.

over its top, and the city and county officials now desire to be informed as to will be done by the United States toward repairing the breaks, raising t embankment to correspond with height of the 1898 flood, and extending it fr upstream.

The claim is made that the embankment is properly part of the Muskingum improvements, ceded to the General Government by the State of Ohio in 1887 should be maintained along with the other work. But its maintenance is not n sary to the interest of navigation, and the protection from inundation afford raising the embankment is questionable, as the section of city was overflow back water from the pool below dam before the upper pool was at a level wit present top of levee.

The actual injury by the recent flood is estimated at about $100, but the c raising the embankment to the height now desired by the city and county is estim at about $6,000.

In my own opinion, the cost of such work should properly fall upon the cit other persons owning the property in its rear; but I submit the facts to your co eration, as I understand that Congressional aid is being asked in the matter.

Very respectfully, your obedient servant,

W. H. BIXBY,
Major, Corps of Engineers, U. S

Brig. Gen. JOHN M. WILSON,
Chief of Engineers, United States Army, Washington, D. C.

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55TH CONGRESS, 2d Session. | SENATE. | DOCUMENT No. 229.

EQUITABLE DISTRIBUTION OF THE WATERS OF THE RIO GRANDE.

MESSAGE

FROM THE

PRESIDENT OF THE UNITED STATES,

TRANSMITTING,

IN RESPONSE TO RESOLUTION OF THE SENATE OF FEBRUARY 26, 1898, REPORTS FROM THE SECRETARY OF STATE, THE SECRETARY OF WAR, THE SECRETARY OF THE INTERIOR, AND THE ATTORNEY-GENERAL, WITH ACCOMPANYING PAPERS, RELATIVE TO THE EQUITABLE DISTRIBUTION OF THE WATERS OF THE RIO GRANDE RIVER.

APRIL 7, 1898.—Read, referred to the Committee on Foreign Relations, and ordered to be printed.

To the Senate:

In response to the resolution of the Senate of February 26, 1898, requesting the President—

"if not incompatible with the public interest, to transmit to the Senate the proceedings of the international commission authorized in the concurrent resolution of Congress of April twenty-ninth, eighteen hundred and ninety, and a subsequent international convention between the United States and Mexico of May sixth, eighteen hundred and ninety-six, and also the correspondence relating thereto with Mexico by the Department of the Interior, Department of War, and Department of Justice, as well as the Department of State, relating to the equitable distribution of the waters of the Rio Grande River, including the draft of an incomplete treaty between said Governments, negotiated between the late Secretary of State, Mr. Olney, on the part of the United States and Mr. Romero on the part of Mexico, and all the correspondence between said officials relating thereto—

I transmit herewith reports from the Secretary of State, the Secretary of War, the Secretary of the Interior, and the Attorney-General, with accompanying papers.

WILLIAM MCKINLEY.

EXECUTIVE MANSION, *April 7, 1898.*

The PRESIDENT:

The undersigned Secretary of State has the honor to lay before the President, with a view to their transmission to Congress, copies of the correspondence called for by the resolution of the Senate of Feb-

Respectfully submitted.

JOHN SHE

DEPARTMENT OF STATE,
Washington, April 4, 1898.

CORRESPONDENCE TOUCHING THE PROTEST OF ME CITIZENS AGAINST THE CONSTRUCTION OF DAM BY THE RIO GRANDE DAM AND IRRIGATION COMPANY.

MEXICAN LEGATIO
Washington, August 4,

Mr. SECRETARY: I have the honor to inform you that received instructions from the Mexican Government to su the United States Government a petition, signed on the 22d last, presented by Don Andrés Horcasitas, attorney of the inh of Paso del Norte, Chihuahua, Mexico, in which, appealing cle VII of the treaty of Guadalupe Hidalgo of February 2, Article I, last clause of the treaty of December 30, 1853; to Ar of the convention of November 12, 1884, and to Article V of vention of March 1, 1889, he requests the Mexican Govern recommend to the United States Government the suspensio work in the Rio Bravo by the Rio Grande Irrigation Compa ited.

As the Mexican Government considers the petition of the ants of Paso del Norte well founded, it has instructed me to t it to you with the recommendation that the orders requested inhabitants be issued.

I therefore inclose a copy of Señor Horcasitas's petition documents accompanying it.

Accept, etc.,

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vithin as short a time as possible, at that city, of an international dam to remedy he distressing situation in which the towns on that part of the frontier are placed, owing to the scarcity of water, which at certain periods of the year amounts to ntire deprivation. At the same time it was stated in that document that in rder that the said dam may benefit all the inhabitants of Ciudad Juarez, a special ommission will have to take charge of the fair distribution of the water accumuated by it, and that the said dam should be constructed at the expense of the Jnited States Treasury, as the imminent ruin threatening the inhabitants of that ity is caused by the immoderate use made of the water of the Rio Grande in the States of Colorado and New Mexico, it being an indisputable principle that "It is not lawful for the United States of the north, as possessing the upper part of the Bravo, to construct within any part of its territory any work absorbing the waters of the river to the injury of those dwelling on the lower part;" and, as a consequence of this principle, the Mexican Government has the right to prevent the construction of such works, and works of the nature of that asked for by the nhabitants of Ciudad Juarez can only be executed by common agreement between the two nations.

The department to which I have the honor to address myself is advocating with its usual energy the petition to which I have referred, and the negotiations between our Government and that of the United States have arrived at such a point that a commission composed of engineers of both nationalities has been appointed which is to be charged with making a technical study of the project, in order that, after seeing it and after receiving reports from the commissions, the two nations may decide by common agreement what steps are to be taken.

But the efforts which our Government, efficiently seconded by that of the United States, has made to remedy the critical situation in which the inhabitants of Ciudad Juarez are placed owing to the scarcity of water would be entirely fruitless if, in addition to the forty dams now existing in the State of Colorado, which have exhausted the water of the Rio Bravo at that city to such an extent that at certain periods it does not contain a single drop, the company entitled "The Rio Grande Irrigation and Land Company, Limited," should be permitted to construct a dam, as it proposes, near Elephant Butte in New Mexico, as may be seen by the prospectus which I duly inclose in English with a Spanish translation and by the synopsis of that prospectus made by the El Paso Herald of the 11th instant, by three blank forms of application for shares, and by copies of two letters which I also inclose with their respective translations.

If the proposed Boyd dam is built, the international dam which the inhabitants of Ciudad Juarez have petitioned for as the only remedy for their already desperate situation will be rendered useless, as there is no doubt that the accumulation of the waters of the Rio Bravo at the former dam will not leave even a small quantity for the second dam, and my clients will find themselves subjected to the unavoidable necessity of abandoning their homes or of buying the water which is so indispensable to their existence at the price that any speculating company may be pleased to fix.

The foregoing statement and the provisions of Article VII of the Treaty of Guadalupe Hidalgo, concluded February 2, 1848, of Article I, last clause, of the treaty of December 30, 1853, of Article III of the convention of November 12, 1884, and of Article I, fifth and last clause, of the convention of March 1, 1889, which expressly provide that all kinds of works constructed in the Bravo del Norte and Colorado rivers affecting the frontier line, or such as are prohibted by the convention of 1884 or the treaty of 1848, shall be submitted to the examination and decision of the International Boundary Commission, furnish me with sufficient grounds for requesting your well-known justice, in the name of the inhabitants of Ciudad Juarez, that you will be pleased to call upon the United States Government to adopt such measures as may be in its power to put a stop to the works undertaken by the Rio Grande Irrigation and Land Company, Limited, for the construction of the Boyd dam, as this matter should be submitted to the study of the boundary commissions of the two nations.

In view of what has been stated and of the weighty arguments and information appearing in former communications relative to the international dam for which I have petitioned in the name of my clients, I beg you to have the goodness to obtain from the President the necessary decree relating to my request in the present communication, whereby the inhabitants of Ciudad Juarez will receive justice and special favor.

Mexico, June 22, 1896.

ANDRES HORCASITAS.

A true copy.
Mexico, July 23, 1896.

M. ASPIROZ.

LAS CRUCES, N. MEX., *July 12,*

Hon. S. B. NEWCOMB, *City.*

MY DEAR SIR: Replying to your request for a copy of the patent or appr the application for right of way and reservoir site for the Elephant Butte voir of the Rio Grande Dam and Irrigation Company, which application w by me on behalf of said company, will say:

I have to-day examined the records of the Las Cruces land office and fo the only "patent" consists of the words "Department of the Interior, Washi D. C., February 1, 1895. Approved, subject to any valid existing rights. Smith, Secretary," written upon the copy of the map of said reservoir file the application, and the letter of the Commissioner of the General Land February 11, 1895, a copy of which I herewith inclose.

I have a copy of the application as originally made, and, I think, of all quent affidavits and statements made to perfect the application, as well statements filed in Sierra County, under the Territorial law to secure righ water. If you wish these, I can furnish you copies.

The map and field notes show distinctly what right of way is granted.

Respectfully,

W. E. B

DEPARTMENT OF THE INTERIOR, GENERAL LAND OFFIC
Washington, D. C., February 11,

REGISTER AND RECEIVER,
Las Cruces, N. Mex.

SIRS: There is herewith transmitted a copy of a map approved by the h Secretary February 1, 1895, under sections 18 to 21, act of March 3, 1891 (1095), and two sets field notes showing the Elephant Butte Reservoir filed office by the Rio Grande Dam and Irrigation Company.

Upon the receipt of the map you will make the proper notations upon y ords in accordance with the instructions of paragraph 26, circular of Febr 1894, reporting such action to this office.

Advise the company hereof.

Very respectfully,

EDW. A. BOWER
Assistant Commis

Notation made and report sent up May 11, 1895.

PROSPECTUS.

[Private and confidential.]

Sufficient of this issue having been guaranteed, the directors will pr allotment on or before the —— day of April, 1896.

Rio Grande Irrigation and Land Company, Limited. Incorporated u companies acts, 1862 to 1893, by which the liability of the shareholders is Capital, £500,000, in 100,000 8 per cent cumulative preference shares of and 400,000 ordinary shares of £1 each.

Issue of £100,000 in 8 per cent cumulative preference shares of £1 e £100,000 in ordinary shares of £1 each. Payable, 2s. 6d. on application; 7 allotment, and the balance as required.

The preference share issue is preferential both as to capital and divide after 8 per cent has been paid on the ordinary shares, ranks pari passu a share with the ordinary shares in the surplus annual profits.

Issue of 1,000 first-mortgage debentures of £50 each (part of authorized £100,000), bearing interest at 5 per cent per annum, payable half-yearly o day of January and the 1st day of July in each year. Redeemable at £5 1st of January, 1916, or previously on six months' notice.

The debentures are offered at £52 10s. per £50 debenture bond, payabl lows: £5 on application, £5 on allotment, £7 10s. one month after allotm three months after allotment, and £25 six months after allotment; total,

The debentures will be secured by a trust deed creating a first mortgage of the trustee for the debenture holders on, first, certain exclusive privil franchises granted by the Government of the United States of America creation of dams, weirs, ditch heads, canals, and other works in connecti irrigation and right of appropriating the waters of the Rio Grande; sec dams, weirs, ditch heads, canals, and reservoirs, and other irrigation wo

structed. In addition thereto debenture holders will further be secured by a ting charge created by the said trust deed on all the other assets of the com- y, both present and future, including (*a*) the lands which shall hereafter be uired in exchange for water rights, the plant and contracts, and the unsold er rights for the time being; (*b*) the income derived from water rents and other ces.

the trust deed provision will be made for a sinking fund sufficient to redeem debentures at maturity, or whenever prior thereto they may be paid off as ided in the said trust deed; and a sum adequate for the payment of interest wo years from January 1, 1896, a period deemed fully ample for construction, be invested in consols by the vendor company, in the name of the trustee for debenture holders.

rustee for the debenture holders: The National Safe Deposit Company, Limited, quis of Tweeddale (chairman), 1 Queen Victoria street, Mansion House, don, E. C.

irectors.—The Right Hon. The Earl of Winchilsea and Nottingham, Haver- ne Priory, Sleaford; The Right Hon. Lord Clanmorris, Bangor Castle, Belfast; d Ernest W. Hamilton, Coates Castle, Pulborough, Sussex; Robert J. Price, P., 104 Sloane street, S. W.; Col. W. J. Engledue, Petersham Place, Byfleet te R. E. and late an engineer in chief and manager Indian State railways); m Ferguson, 14 St. George's Square, S. W. (Ramage & Ferguson, Limited), pownor and shipbuilder, Leith; Nathan E. Boyd,[1] Kilmarnock House, Kenley, rey (president Mesilla Valley Irrigation Colony, New Mexico); R. Chetham- ode,[1] Fairholme, Pinner, Middlesex.

ocal directors.—The Hon. W. T. Thornton (governor of New Mexico); Edwin Roberts (director the Rio Grande Dam and Irrigation Company, United States America); Joshua S. Reynolds (president First National Bank, El Paso, Tex.); m M. Yair (director Mesilla Valley Fruit and Vine Growing Company, Lim- l); Henry D. Bowman (Bowman & Sons, bankers, Las Cruces, N. Mex.).

ankers.—The Royal Bank of Scotland, St. Andrew Square, Edinburgh, 123 hopsgate street Within, London, E. C., and branches (for the company). srs. Brown, Janson & Co., 32 Abchurch lane, London, E. C. (for the trustee).

ocal bankers.—First National Bank, El Paso, Tex.; Bowman & Sons, Las ces, N. Mex.

rokers.—Messrs. R. B. Smith & Co., 10 Throgmorton avenue, and Stock hange, London, E. C.; Mr. J. Souter Sanderson, 10a North St. David street, Stock Exchange, Edinburgh; Mr. Douglas Cairney, 45 West Nile street, and k Exchange, Glasgow; Messrs. Marsland & Chew, 4 St. Ann's square, and k Exchange, Manchester; Messrs. Godfrey & Laws, 12 Mount Stuart square, liff.

uditors.—Messrs. Ford, Rhodes & Ford, 81 Cannon street, London, E. C.

ngineer.—John L. Campbell, C. E.

licitors (to the company).—Messrs. Nicholson, Graham & Graham, 24 Cole- street, London, E. C.; Messrs. Davis, Beall & Kemp, El Paso, Tex.

licitors (to the vendor company).—Messrs. Minet, Pering, Smith & Co., 81 non street, London, E. C.

licitors (to the trustee).—Messrs. Ashurst, Morris, Crisp & Co., 17 Throgmor- avenue, London, E. C.

gistered office of the company.—34 Victoria street, Westminster.

cretary (pro tempore).—N. P. Allison.

PROSPECTUS.

his company has been formed to acquire, by lease and assignment, the fran- rights, water rights, right of appropriating the waters of the Rio Grande ited States of America), contracts, properties, and undertaking of the Rio ade Dam and Irrigation Company, and for the purposes of irrigating, coloniz- and improving the lands in the famous Rio Grande Valley, between Engle, Tex., and Fort Quitman, Tex.

he vendor company was incorporated in 1893, under the laws of New Mexico, ed States of America, to construct irrigation works and consolidate under corporate body certain irrigation rights and interests in the Rio Grande Val- in southern New Mexico and El Paso County, Tex.

the Rio Grande Valley the inexhaustible fertility of the soil, the capabilities rrigating with the fertilizing waters of the Rio Grande—the Nile of America— bined with the exceptionally fine climate, so peculiarly adapted to fruit and

[1] Shareholders in and representing the vendor company.

The completion of the company's system of canals will bring 230,000 valley lands under ditch, and by the construction of the high-level cans 300,000 acres of magnificent mesa (low-lying table lands) can be irrigated engineer's report.)

The amount of fertile alluvial lands capable of being irrigated by the co canals, when completed, is only limited by the flow of the Rio Grande, one of the largest of the American rivers. Though the greatest flow of t occurs during the months of April, May, June, and July, just when the and vineyards most require irrigation, the storage of water is necessitated the minimum flow of the river generally occurs about the end of the cropp son, when some irrigation is still requisite, and because an adequate s water must also be insured for irrigation in the early spring, when the rive

The vendor company has secured, under United States Federal law, feasible reservoir site on the Rio Grande in southern New Mexico, and pletion of the storage dam at Elephant Butte will create the largest artifi in the world (11,036,722,000 cubic feet) at a cost of 4s. 9d. per acre-foot (c as compared with the cost of the Sweetwater Dam (California), £8 10s acre-foot; the Merced Valley Dam (California), £5 10s. 10d.; Castlewo (Colorado), £7 10s. 4d. per acre-foot. (Vide the engineer's report.)

In acquiring this splendid natural reservoir site the company will ob trol of the entire flow of the Rio Grande in southern New Mexico, the o tical means of irrigating what is now considered to be the finest fruit country in the United States.

In controlling the water the company will, to a great extent, control th ble lands.

Many of the owners of irrigable lands in the valley have already contr convey to the vendor company one-half of their lands in return for water the other half, and to pay a water rent of $1.50 (6s.) per acre per annum acre of their land irrigated. A water right is the perpetual right to t water for irrigation purposes at a fixed annual rental per acre irrigat inalienable from the land to which the water right pertains.

Obviously the remaining land owners must, in order to render their p of value, concede a large portion of their lands for water rights or purc said water rights, at the ruling rate, from the company.

By exchanging water rights for lands it is estimated that the comp obtain in fee simple within two years not less than 40,000 acres of irrigab lands, and by constructing the proposed high-level canal quite two-thir vast mesa lands can be secured by the company from the Government a owners upon even more advantageous terms.

The mesa lands, like the valley lands, are alluvial deposits, level, c ready for the plow, equally as suitable for fruit and vine culture as th

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ny's franchise over 48,000 acres of valley lands have already been
ditch. At $1.50 (6 shillings) per acre per annum (the minimum
ls alone will give an income of £15,000 per annum.
npletion of the dam, weirs, and main canal the company does not
water rights under £10 per acre, and water rents under water rights
lst day of January, 1897, will in all probability be raised to not less
gs per acre per annum. Under the Sweetwater irrigation system
e annual water rent is $3.50 (14 shillings) per acre, and lands with
re sold for £40 per acre more than lands without water rights.
ia State engineer's official report.)
hole of the proposed irrigation works are carried out over 230,000
lands and about 300,000 acres of mesa lands will be under ditch.
s pay an annual water rent of $1.50 (6 shillings) per acre and the
0 (10 shillings) per acre, and allowing that two-thirds only of the
be irrigated in any one year, the company will derive an annual
vater rents alone of £175,000.
of £10 per acre for water rights will give the company from the sale
s to, say, 300,000 acres £3,000,000. The net return per acre will in
be much higher, as many landowners are at present unable to pay
iving one-half their lands for water rights to the other half. These
e readily salable at from £20 to £50 per acre as soon as under ditch.
f the irrigation works of the company are by law exempt from tax-
ears.
y and enterprise and the cost of building the canals and a solid
ie and concrete) dam have been exhaustively investigated and
by the company's engineer, a thoroughly competent authority in
hydraulic matters.
's estimates for construction (allowing for contingencies, see report)
: Main dam at Elephant Butte, £52,398 19s. 2d.; dam No. 2 (weir,
5,807 1s. 8d.; dam No. 4 (ditch head), £4,095 6s. 3d.; distributary
gation from main dam to lower end of Mesilla Valley (see map),

e been received by the vendor company from reliable and well-known
ich show that the main portion of the works (the portion tendered
cuted according to specification at a price well within the engineer's

nts herein are based upon reports made by Col. Anson Mills, United
who was specially deputed by the United States Government to
ct of damming the Rio Grande; Maj. J. W. Powell, late Director of
tes (Government) Geological Survey; John F. Wielandy, late secre-
State board of agriculture; Prof. Hiram Hadley, A. M., president
rnment) College of Agriculture, Lascruces, Rio Grande Valley,
L. Campbell, C. E.: E. V. Berrien, esq., and others.
be paid to the vendor company for its franchise, property, rights,
d and water contracts, etc., has been fixed at £326,500, payable,
, and £300,000 in fully paid up ordinary shares (out of which the
£5,000 in consols, for payment of interests on debentures during
The vendor company will also be paid the premiums received on
ue of debentures. The vendor company will pay all the expenses
on and promotion of the company up to the first general allotment,
he right to subscribe for any portion of the share capital for the
subscribed at a premium of one-eighth per share.
tract to which the company is a party is between the vendor com-
e part and the company of the other part, and dated the 12th day
896, relative to the acquirement of the vendor company's rights and
The vendor company has entered into contracts and arrangements,
ompany is not a party, in respect of the formation of the company
nteeing of a portion of its capital, which may be contracts within
f section 38 of the company's act, 1867, and applications for shares
d only on the understanding that the applicants waive the specifi-
ates of and the names of the parties to such contracts and arrange-
ive any further compliance with the said section other than herein

for debentures and shares must be made on the accompanying
lged with the amount payable on application with the company's

ent is made, the deposit will be returned in full, and should the
entures or shares allotted be less than the number applied for, the
credited in reduction of the amount payable on allotment.

(1) To purchase, lease, obtain concessions of, or otherwise acquire lan
hereditaments of any tenure, or to obtain any interest in any lands or h
ments in the Territory (or State) of New Mexico, United States of Ame
elsewhere; and to work, manage, and develop the same in such manner
company shall think fit, and in particular to build dams, weirs, canals,
acequias, ditches, culverts, filter beds, pipes, aqueducts, and other irrigation
either for irrigation or other purposes, and to execute and do all other
necessary or convenient for obtaining, storing, impounding, selling, deli
distributing, and measuring water for irrigating the lands of the company,
the sale and distribution of water to owners or occupiers of lands not bel
to the company, and for the sale of water rights, and for carrying on the b
of an irrigation and waterworks company in all its branches. To erect, in
and maintain piers, warehouses, factories, foundries, wharves, dwelling
and such other premises, buildings, mills, machinery, and plant, and to co
such roads, railways, tramways, waterworks, reservoirs, telegraph, wate
electric, and power supply works, shops, stores, drainage, sanitary, and
works and conveniences as may seem calculated, directly or indirectly, to a
the company's interests.

(2) To supply water to cities and towns and others for irrigation, domes
municipal purposes, and for milling and mechanical power. To irrigate, c
cultivate, improve, develop, and otherwise turn to account the resources
lands, estates, or other properties that may be acquired by the company,
such purpose to purchase such horses, mules, cattle, stock, and implem
may be necessary for cultivating, clearing, planting, farming, and pastur
lands of the company, and from time to time to sell all or any part of the
dead stock and the produce of the said lands. To carry on the business
eral merchants, manufacturers, planters, farmers, and cultivators of the
all its branches. To grow trees and vines and deal in agricultural produ
timber. To grow, purchase, or sell grapes, oranges, lemons, and other
and to manufacture, purchase, or sell wines, spirits, barrels, casks, jars,
and other vessels. To erect and carry on fruit and vegetable cannin
ing, and evaporating works in all their branches; also, to carry on the
of breeding, importing, and exporting sheep, cattle, and horses, or any oth
ness, trade, or undertaking the carrying on of which may be deemed by t
pany conducive to the development of its property or interest therein. T
acts conducive to promote the colonization and settlement of the lands
company, and in particular by the establishment of towns, villages, and
ments and the erection of schools, churches, hotels, and such other inst
as may be calculated directly or indirectly to improve or advance the pr
of the settlers on the lands of the company.

(3) To advance and lend money to settlers, colonists, and others, with

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note or establish any company for the purpose of acquiring the whole or any of the property of this company, or for carrying on its business.

) To purchase for investment or resale and generally to traffic in land and se and other property of any tenure, and any interest therein, and to create, and deal in freehold and leasehold ground rents, and to make advances upon security of land, fruit farms, and vineyards, or house or other property, or interest therein, and generally to deal in, and traffic, by way of sale, lease, ange, or otherwise, with land and house property, and any other property, ther real or personal.

) To buy, sell, import, export, manipulate, prepare for market, and deal in chandise of all kinds, and generally to carry on business as merchants, orters and exporters.

7) To borrow, raise, or secure the payment of money in such manner and on h terms as may seem expedient, and in particular by debentures, debenture k, or mortgages, whether perpetual or redeemable, at a premium or otherwise, l charged or not charged upon the whole or any part of the property of the npany, both present and future, including its uncalled capital.

8) To draw, accept, indorse, and make, discount, execute, use, and issue, promry notes, bills of exchange, bills of lading, warrants, debentures, debenture nds, and other negotiable or transferable instruments.

9) To apply to the government or legislature of the Territory (or State) of w Mexico, State of Texas, Mexican State of Chichuahua, or to the Federal horities of the United States of America, or Republic of Mexico, or to any er authority, for any charters, grants, concessions, irrigating, mining, or other vileges or authorities for the better enabling the company to carry out the ects of the company.

10) To enter into any arrangements with any government or authorities, ether supreme, municipal, local, or otherwise, that may seem conducive to the siness or objects of the company, and to carry out and comply with any such angements.

11) To sell, lease, exchange, or otherwise deal with or dispose of the whole or y part of the undertaking, rights, or privileges, or the lands and hereditaments, nt, machinery, and buildings of the company, or any interest therein, for such nsideration as the company may think fit, and, in particular, for shares, debenres, or securities of any other company, having objects altogether or in part milar to those of this company, or carrying on any business which this company authorized to carry on.

(12) To distribute among its members in kind or in specie any property of the mpany, or any proceeds of sale or disposal of any property of the company, but that no distribution, amounting to a reduction of capital, be made, except with e sanction (if any) for the time being required by law.

(13) To tender for, purchase, or acquire from liquidators, trustees, or other rsons the assets or estates of any insolvent or other corporations, companies, ociations, firms, or persons, and for the purposes of giving effect to and realng the benefit of any such acquisition, to carry on and conduct any business nprised in any such estate or assets, whether such business is or is not expressly luded among the objects of the company as defined by this memorandum of ociation.

14) To remunerate by way of allowance of brokerage or commission, or in any er manner, any person or persons for services rendered, or to be rendered, or assisting to place any shares of the company's capital, or any debentures, enture stock, or other securities of the company, including all commissions or r remuneration to brokers and other persons, for procuring or obtaining setnents and quotations upon London or provincial, or foreign exchanges, of the share or debenture capital, or of the share or debenture capital of any busiundertaken by the company, and to make donations to such persons, either ash or other assets, as the directors of the company may determine to be ctly or indirectly conducive to any of the objects of the company, or otherwise dient.

5) To obtain any provisional order, license, authorization, or act of Parlia-t, or other legislative authority, for enabling the company to carry any of its cts into effect, or for effecting any modification of the company's constitution, to oppose any applications to Parliament or any other legislative authorities h may seem calculated directly or indirectly to be prejudicial to the interest e company.

3) To make all deposits of money or securities and do all things necessary for compliance with the laws and regulations of any government in any place e the business of the company may for the time being be carried on, and for purpose, if necessary, to conduct its business through any subsidiary com-

(21) To do all or any of the above things either as principals, agents, contr
trustees, or otherwise, and by or through trustees, agents, or otherwise, and
alone or in conjunction with others.

(22) To alter this memorandum of association in such particular as may be
to be desirable, and to make by-laws, rules, and regulations for the manag
of the company or otherwise.

(23) To do all such other things as may be incidental or conducive to the
ment of all or any of the above objects.

4. The liability of the members is limited.

5. The capital of the company is £500,000, divided into 100,000 cumulativ
erence shares of £1 each, to be numbered 8 to 100007, inclusive, and 400,00
nary shares of £1 each with power to increase. Any shares of the original
and any new shares from time to time to be created, may (but subject alwa
without prejudice to the rights of the holders of the original preference
from time to time be issued with any such guaranty or any such right of
ence, whether in respect of dividend or repayment of capital, or both, or an
other special privilege or advantage over any shares previously issued, o
about to be issued, or at such a premium, or with such deferred rights as co
with any shares previously issued, or then about to be issued, or subject
such conditions or provisions, as the company may from time to time by
resolution determine. But no such issue shall be made without the con
writing of the holders, for the time being, of at least three-fourths of any p
issue of shares which will be thereby affected.

6. Before payment of any dividend on, or making any distribution of pr
respect of the ordinary shares, there shall be set aside out of the net profits
company such sum or sums as the directors from time to time in their a
discretion think proper, as a reserve fund to meet contingencies, or for equ
dividends, or for providing for the redemption of the debentures of the co
(if any), or for repairing or maintaining any property of the company, or f
other purposes as the directors shall think conducive to the interests of th
pany. Such fund shall be applied for the purposes for which the same sha
been set aside, as and when the directors shall determine. Subject there
fund shall belong:

(a) To such preference shares as may, for the time being, be preferenti
dividends and capital to the extent of the dividends, if any, unpaid and
extent of the amount per share, for the time being paid up on such pre
shares.

(b) To the ordinary shares and others, if any, to the extent of the amo
share paid up on such shares. If any surplus, the original preference sha
ordinary shares (except as may hereafter be provided with the sanction
extraordinary resolution as defined by section 129 of the "companies act.

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shares, a dividend at the said rate of 8 per cent per annum, the directors shall pay on the said shares such a dividend as the net profits in that year will provide, any deficiency in the dividend of the preceding year or years to become payable and be paid out of the profits of the next and subsequent years.

(c) Subject to subsections (a) and (b) of this clause, the net profits in each year, after paying in full a dividend at the rate of 8 per cent per annum on the amounts for the time being paid up on the original cumulative preference shares, and after paying a dividend of 8 per cent per annum on the amounts for the time being paid up on the ordinary shares, shall become divisible pro rata among the holders of the original cumulative preference shares and the holders of the ordinary shares, and on becoming divisible, shall be so divided among them according to the amount of shares held by them and in proportion to the amounts for the time being paid up thereon.

(Indorsement:) Issue of £100,000 in 8 per cent cumulative preference shares, £100,000 in ordinary shares, and £50,000 in 5 per cent first-mortgage debentures.

[The Rio Grande Irrigation and Land Company, Limited.—Capital, £500,000.—Prospectus.]

WASHINGTON, *August 8, 1896.*

Colonel ANSON MILLS, U. S. A.,
Commissioner, United States and Mexico International (Water) Boundary Commission, El Paso, Tex.

SIR: I inclose herewith, with a view to receiving your suggestions on the subject, a copy of a note from the Mexican minister at this capital, transmitting copy of a petition addressed to his Government by Don Andres Horcasitas, attorney of the inhabitants of Paso del Norte, Mexico, in which he requests the Mexican Government to recommend to that of the United States the suspension of all work in the Rio Bravo by the Rio Grande Irrigation Company, Limited.

The Mexican Government considers the petition well founded and recommends that the requested orders be issued.

Asking you to return, with your reply, the printed inclosures herewith, I am, sir,

Your obedient servant,

W. W. ROCKHILL,
Acting Secretary.

(Inclosure: From Mexican Legation, August 4, 1896, with inclosures.)

EL PASO, TEX., *November 17, 1896.*

The honorable the SECRETARY OF STATE,
Washington, D. C.

SIR: Referring to your letter of August 8, transmitting copy of a petition addressed to this Government by Don Andres Horcasitas, attorney of the inhabitants of Paso del Norte, Mexico, in which he requests the Mexican Government to recommend to that of the United States the suspension of all work in the Rio Bravo (Grande) by the Rio Grande Irrigation Company, Limited, and your request for suggestions from me on the subject, I beg to submit herewith my report on the matter.

As stated in my letter to you of October 29, I have withheld this report of necessity, because the investigations going on by the engineers of the joint commission regarding the amount of water taken out by the Americans and the former flow of the river year by year had not been completed up to this date, and it was impossible for me to make an intelligent report until they were.

Butte, about 125 miles above El Paso; a distance so great that in arid climate it is utterly impracticable to carry water to this vici and consequently could be of no benefit to agricultural interests notwithstanding the statements in their prospectus that they pr to provide water not only here in Texas, but on the Mexican si the river.

At the same time, I learned that this same company had applications for two additional dams and reservoirs, one at Ri N. Mex., about 100 miles above El Paso, and another at Fort S about 60 miles above.

At this latter place a gentleman by the name of Ernest Dale had also an application on file at the same point as the Rio G Land and Irrigation Company, which antedated all the applic of this last-mentioned company.

For a full understanding of the status of these three last-men applications, I beg to refer to a communication from the Commis of the General Land Office to the Secretary of the Interior, August 15, 1896, fully discussing their relative merits. (Cop with inclosed, marked B.)

The Secretary had, when I met him, under consideration, a about determining, the question as to approval or disappro these three last applications, but at my verbal suggestion he pr to hold them until my letter to you of October 29, hereinbefor tioned, should be referred to him by your Department.

The investigations of the engineers of the Joint Commission i amount of water taken from the Rio Grande and its tributa Colorado and New Mexico since prior to 1880 up to this dat that prior to 1880 there were in Colorado 511 canals, using acre-feet and irrigating 121,000 acres of land. That this num ditches and amount of land irrigated kept increasing year b until, at this date, there are 925 canals, using 556,000 acre- water and irrigating 318,000 acres of land.

In New Mexico there were, prior to 1880, 563 canals, using

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part of several years. The dry river of 1889 lasted longer than
of the others; no water passed El Paso that summer for over four
hs. The water fell earlier in the spring of 1896 than ever before;
ow, which had been small all the spring, ceasing May 26; but the
us summer rains on the New Mexican drainage sent down water
ly and the flow of the river was intermittent after that date.
ds are not so frequent as in former years, the last destructive one
rring in 1884. There was a small flood in 1891, but it was not so
as that of 1884.
e records of the flow of the river for the past sixteen years are
meager; that for eleven months prior to March 31, 1890, was
00 acre-feet. This includes the long drought of 1889. For the
ending March 31, 1891, the flow was 1,100,000 acre-feet; for 1892,
,000 acre-feet, and for 1893, 875,000 acre-feet.
hat has been stated above is a very brief extract from the large
of information and statistics taken by our engineers, from which
m the following conclusions:
at the probable flow of water in the river here is likely to be
e for the supply of the proposed international reservoir after
ctions are made for all the small reservoirs that are likely to be
ructed for storage in Colorado and the probable increase of
s in Colorado and New Mexico, but that the flow will not be
ient to supply the proposed international reservoir here and
for the supply of the proposed reservoir of the Rio Grande Irri-
n Company, Limited, at Elephant Butte, in New Mexico, or any
similar reservoirs in New Mexico, and but one of these schemes
e successfully carried out.
general results that the joint commission are now arriving at
rning the flow of the river, from the investigations of the engi-
, are: That the flow here at El Paso has been decreased by the
priation of waters above, in the last sixteen years, about 1,000
d-feet for ninety days annually, and that the water appropriated
e citizens of Mexico for over forty years past, in the valley of
so, amounted to about 400 second-feet, and that that appropri-
by the citizens of the United States in the same valley for the
length of time amounts to about 350 second-feet. All this, of
e, is approximate, but it is as near correct as can possibly be
d at by any data or evidence now available.
ould therefore suggest that these papers be referred to the hon-
, the Secretary of the Interior, with the request that no further
s for reservoirs be made in New Mexico, and that if practicable
proval of the reservoir of the Rio Grande Land and Irrigation
any, Limited, at Elephant Butte be canceled or withdrawn, and,
practicable to cancel or withdraw the same, that such executive
islative restriction be placed upon it as to prohibit it from using
art of the flow of the river to which the inhabitants of either
of the river below may have a prior right by appropriation, and
some prompt and efficient remedy be provided the possessors of
prior rights by appropriation in case the company should use
ater to which the inhabitants referred to are entitled.
I understand the matter, the irrigation laws are so imperfect
rude at this date that even in the same State or Territory there
effective legal remedy when water is thus unjustly appropriated,
separate States it is still more difficult, while to the inhabitants
xico it would be impossible to make any successful effort at
s.
turn herewith copy of the protest with attached papers, among

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for by the express terms of section 15 of the act of 1891 (supra) the control
water is left entirely within the jurisdiction of the Territory, and the deci
controversies as to water right must be left for the Territorial courts.
Mesilla company's application were to be approved and its dam located
lower point, it would not be difficult to determine how much water t
Grande Dam Company is entitled to for this half-mile stretch of river, if it
be found the better.

As to the question whether the Mesilla Valley Company is entitled to
right of way for this lower half mile of its reservoir, it is observed tha
amended articles of incorporation of March, 1895, it is authorized to tak
from the Rio Grande River at any point in New Mexico and El Paso Cou
Texas. The amended articles of incorporation describe the reservoir as l
the western part of T. 20 S., R. 2 W.; and in the beginning of the field
its water-right notice the initial point is similarly described as in the east
of the township. There was the same error in the field notes filed in this
February, 1893, but the map filed at that time showed the location of the r
in the eastern part of the township and approximately on the location sh
the present map. The maps and papers show that T. 20 S., R. 2 W., was
doubt a clerical error, and that it should have been T. 19 S., R. 2 W. In
the ease with which such corrections in articles of incorporation may b
under the Territorial laws, this office does not consider that the error noted
interfere with the consideration of the right of way application. Were t
sideration to be looked upon as important, the application of the Rio Gran
Company would be fatally defective, inasmuch as its articles of incorp
authorize it to take water from the river only "within townships 13 and
ranges 3 and 4 west, in Sierra County, N. Mex." These are intended to b
townships, and are some 50 miles from the place in controversy. But, a
before, the necessary amendments of the articles of incorporation being so
made, it does not seem important to insist upon them in such cases as the
before approval, inasmuch as it is within the scope of the company's auth
construct and maintain dams, reservoirs, etc.

The question before this office is as to the priority of the application for
way; upon this nothing is shown to offset the facts shown by the records
office that both the original application of 1893 and amended application
10, 1895, of the Mesilla company are prior to the application of the Rio
Dam Company, filed July 11, 1895.

The Mesilla company being, in the opinion of this office, sufficiently aut
to take such right of way, and its application being in due form, it is
mended that its articles of incorporation and proofs of organization be ac

here appears to have been a controversy as to filing of papers by William E. ter for the Mesilla company in the local land office on January 18, 1896, the ister refusing to receive them because offered after 4 o'clock. The question olves a matter of a few minutes; and as the papers were filed on the 20th and hin the proper time, it is not necessary to go into the controversy.

Very respectfully,

S. W. LAMOREUX, *Commissioner.*

wo papers attached: First. This case to be held until October 15, 1896, for filing rief by Mr. McGowan. (Signed) J. P. Dated September 22, 1896. Second. est Dale Owen, 916 Stock Exchange Building, Chicago, Ill., attorney Mesilla ley Land and Irrigation Company.

DEPARTMENT OF THE INTERIOR,
Washington, December 19, 1896.

e honorable the SECRETARY OF STATE.

IR: I have the honor to submit, in response to your communica- n of November 30, the inclosed paper, prepared under the direction the Assistant Attorney-General, which fully sets forth the claims l contentions of the Rio Grande Dam and Irrigation Company, and cusses at considerable length the laws of the State of Colorado and rritory of New Mexico relating to waters, and the acts of Congress d rulings of this Department relating to irrigation.[1]

The application of the Rio Grande Dam and Irrigation Company s approved by my predecessor on the 1st day of February, 1895. my opinion I have no right, under the law, to revoke this approval. has been decided by the Supreme Court of the United States in the se of Noble *v.* Union River Logging Railroad Company (147 U. S., 5) that the approval by the Secretary of the Interior of a right of y for railroad purposes over the public land can not be revoked by successor, and upon the principle therein declared I deem it yond my authority to revoke my predecessor's approval of the map d by the Rio Grande Dam and Irrigation Company.

Assuming that I had such power, I submit to you whether or not the rcise of it would be proper in view of the opinion of the Attorney- eral of your Department under date of December 12, 1895. (21 Att. Gen., p. 274.)

t is not the duty of this Department to protect the citizens of the ited States against unlawful appropriation of the waters of the tes and Territories by the inhabitants thereof, and if no treaty igations of the Government are involved, I do not believe that I uld assume to interfere.

ince the receipt of your communication complaints have been made his Department by parties now having applications for irrigation vileges pending for the vacation of my order of December 6, 1896, n the ground that the effect of such order is to imperil their rights subordinating them to the claims of persons who may hereafter for ful or nefarious purposes enter lands along the rights of way applied

Very grave inconvenience would arise if such claims are filed, I therefore submit for your consideration whether or not there is her need for continuing the suspension heretofore declared.

mmediately upon receipt of your communication I addressed to Commissioner of the General Land Office directions that he sus- d all applications for right of way through the public lands for

[1] Omitted.

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off of the waters of the Upper Pecos in New Mexico would
riously affect the navigation of the Rio Grande and the rights o
citizens of Mexico, under international law and treaty?" is one
difficult to answer, and of such broad scope as to require greater
and investigation, to intelligently do so, than I have heretofore
the matter. But I will endeavor to comply with your request t
best of my ability.

The Rio Grande, rising in the southern middle portion of Col
from numerous mountain tributaries, passes through the entir
ritory of New Mexico, at the southern boundary of which it be
the international boundary between the United States and M
and empties into the Gulf of Mexico a distance from its source
sinuosities of its bed of over 2,000 miles; about 700 miles of wh
within the exclusive jurisdiction of the United States, in Colorad
New Mexico, and 1,300 miles (according to the survey of the B
ary Commission under Emory and Salazar in 1852 to 1854) fr
Paso to the Gulf constitutes the international boundary betwe
two republics.

The greatest source of water supply which this river has is fr
numerous mountain tributaries before mentioned in the State o
orado, derived from the excessive accumulations of snow in th
ter season and the bountiful supply of rains during the su
seasons in that locality. After passing the Colorado line int
Mexico it enters a dry belt, where it receives little increase
flow, either from perennial streams or the surface drainage from
falls, until it has become the international boundary. Some 200
below El Paso it receives its next greatest source of water suppl
the river Concho, of Mexico. This river has its source in the M
Mountains of Mexico and is a perennial stream of great magn
About 150 miles below the mouth of the Concho the Rio G
receives the river Pecos from the United States side, a per
stream of no considerable magnitude, for the reason that altho
receives almost its entire water supply from the mountains in e
New Mexico, it passes through about 250 miles (by the river's c

ew Mexico and contributes but a very small portion of water to ver compared to the other rivers mentioned.

m northern New Mexico to the mouth of the Concho there are portant mountain ranges with any great rainfall near the river. tmosphere is very dry and the evaporation great, so that the l flow of water at Embudo, a short distance south of the Colo- ine, is depleted by absorption, evaporation, and irrigation before hes El Paso.

he 1,300 miles constituting the international boundary, the river e divided into three distinct sections. The first from El Paso r the mouth of the Concho has alluvium bottom lands where eam is not at all contracted and where the fall is quite uni- about 3 feet to the mile. From near the mouth of the Concho w Eagle Pass the river runs through narrow gorges with little l bottom, for the most part with steep and abrupt rocky walls ck bottom, and numerous rapids and falls that would render tion by steam impossible and almost impracticable to move n high water) with small boats. From near Eagle Pass to the e river again has large alluvial bottom lands with almost a n fall of about 2 feet per mile. Over the entire length of this, as over the first division described, below El Paso, it is prac- every season in high water to move rafts, barges, and small ither up or down the river, and during the whole length of the ere are numerous ferries at all cities, towns, and settlements sporting passengers, vehicles, and goods from one international f the river to the other. At many of these points the quick- nders it impossible to ford at the ferries when the river becomes that the boats can not be worked, necessitating detours to where the quicksand will admit of fording.

not certain whether I understand you desire a description of sent status of the river regarding navigation or its status at e the treaty of Guadalupe Hidalgo was made; but as what- terstate or international rights exist must have been derived he treaty referred to, I assume that you desire a description of r and its character regarding navigation at the time the treaty nsummated. I will proceed on that supposition, continuing cription down to the present date as far as I am able.

r Emory, the United States commissioner, with Mr. Salazar hed this boundary only a few years after the treaty was signed, traversed the entire length of the international part of the nd is perhaps the best authority at that date; so I shall quote extracts from his report on that survey. On page 54, in com- the bar at the mouth of the Rio Bravo, he says:

annel of the mouth of the Rio Bravo varies a little in depth, but it is nore than 6 feet or less than 4. It is of soft mud and of the numberless rounded there during the war not more than one or two were lost. The razos Santiago is of hard sand, and a vessel grounded there is certain to be

age 63 he says:

autiful town of Roma, 16½ miles above Ringgold Barracks is the present steam navigation.

is 258 miles from the mouth. On page 70 he says:

before stated that the present head of steam navigation is Roma. At tant date, no doubt, the navigation will be extended up as high as the f Devils River, a distance measured by the sinuosities of the river of 567 nd with this in view the assistants in charge of the lineal surveys have

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neau Island, and Chessboard Island. The worst of these islands are Isl
30, and the Islitas. No. 25 is sometimes called Major Browns Island, from
cumstance of the steamer *Major Brown* being detained there a whole seas
ing for a rise of water. No. 30 is a couple of small islands at the foot o
the channel is 11 or 12 feet wide. Of the three last-named obstructions th
is the most formidable. Here, in fact, there is no channel, and the rocky
obstructing the passage of the water can only be passed at high water fro
to September. Other obstructions besides islands are caused by numero
and spurs of rock. Just above Bellville there is a formidable obstructio
kind marked by the wreck of the steamer *Exchange*. This obstruction is
by two reefs running in from opposite sides and overreaching each oth
leaving but a crooked channel through which the river passes at the rate o
an hour. A similar obstacle occurs about 15 miles below Eagle Pass.

Other reefs occur, running entirely across the river, and, it is supposed,
one above the other. In seasons of excessive dryness they are bare of wa
such character are the obstructions noted in the field notes of Mr. Schott,
snares," "the meshes," "the stone turtles," "the devil's pen," all situated
the Islitas and Eagle Pass.

In most cases the rocks forming the obstructions are sedimentary rock
Upper Cretaceous age, lying in horizontal strata. Those would yield
the pick. How far it would be prudent to resort to cutting away these
dams as a mode of improving navigation, which would necessarily lo
pools above, would be a subject for investigation for each locality. My
this report is only to present a general view of the character of the diffic
the way and present such maps as would render unnecessary any genera
of the river hereafter.

From Lipan Crossing, 85 miles above the mouth of the Pe
652 miles above the mouth of the Rio Grande, to Eagle Pas
tance of 125 miles, Major Emory describes the survey as havi
of necessity, because of the unapproachable character of the
banks, made in small boats procured from San Antonio, down
(See pages 78 and 79, Major Emory's printed report.)

Captain Love, of the United States Army, in a report to th
termaster-General dated September 5, 1850, states that he a
the river in a vessel drawing 18 inches of water to some imp
falls, which he named Brooke's Falls, where he left his boat
ing a skiff around the falls, when he rode 47 miles farther to
falls, which he named Babbitts Falls, and that this point wa

rted to. By reason, however, of the depletion of the water, it ld now hardly be practicable to do so.

ı the fall of 1894, when I first began work on this commission, I cured a large flatboat at Ringgold and carried my commission, coning of twelve men, with all our camp equipage, instruments, and nsils, down the river to near Brownsville, camping at the different ıcos where we had work, and experienced no difficulty in doing so. e steamer *Bessie* was then plying regularly between Brownsville l Rio Grande City (Fort Ringgold).

Brig. Gen. Zenas R. Bliss, commanding Department of Texas, in report of his inspection of his department last year, makes referse to this matter of navigation, from which I make the following ract:

left Fort Ringgold on March 12 and proceeded by spring wagon to Fort Brown. wagon road, which in wet weather is almost absolutely impassable, was dry and xcellent condition. The river boat was at Ringgold, but owing to the low stage ater and the uncertainty of the time of her arrival at Brown, I took the land e. The water in the Rio Grande seems to be steadily decreasing in volume. 846 General Taylor moved his troops by boat to Camargo, with their supplies, the river could not be depended upon now for any such operations. Thirty s ago boats drawing 6 feet of water ascended readily as far as Roma, above ggold. Now the boat drawing less than 3 feet of water has great difficulty in ing to Ringgold, and has made no trip since last March. (See report dated Antonio, Tex., September 8, 1896.)

ı 1865, when General Sheridan had his army of 50,000 men on the er Rio Grande border, he had in use some thirty steamboats, sev- of them gunboats, plying between the mouth of the river and ıargo, transporting his men and supplies. It can therefore be ed as a matter of fact that as late as that date the Lower Rio nde was navigable by first-class methods—steam—for the move- t of a large army and its supplies. And it is a further matter of that this navigability of the river has been largely depleted, st wholly destroyed, by the cutting off of the waters of the Rio nde and its tributaries in Colorado and New Mexico. To which the cutting off of the waters of the Pecos by present dams has to e extent contributed, though in a very small degree compared ı the effect created by the ditches in Colorado and New Mexico.

follows, therefore, that the further cutting off of the waters in that r would in a slight degree "injuriously affect the navigation of Rio Grande and the rights of the citizens of Mexico under interonal law and treaty."

hile it is certain that a portion of the river as before described is as a navigable stream in the broadest sense, your suggested ques- in the following language, "As an entirely different matter, I re to know whether the Rio Grande River is a navigable water of United States within the sense of the constitutional provision ng Congress the power to regulate commerce among the several es" (Constitution, Art. I, sec. 8, clause 3), seems to embrace the re river as a whole so far as it constitutes the international ıdary; that is to say, from El Paso to the Gulf.

lo not feel myself competent to express an opinion on this entire broad subject that would have any material value. Having stated acts so far as I am able within my knowledge, I leave that ques- for others more skilled than I in the legal aspects of the case.

I have the honor to be, very respectfully, your obedient servant,

ANSON MILLS,
Colonel Third Cavalry, U. S. A., Commissioner.

to this Department the inclosed petition from Mexican citizens about Paso del Norte, Mexico, protesting against the immodera of the waters of the Rio Grande River and its tributaries by res of Colorado and New Mexico. The Mexican minister called att to article 7 of the treaty of Guadelupe Hidalgo, of February 2 to article 1, last clause, of the treaty of December 30, 1853; to 3 of the convention of November 12, 1884; and to article 5 convention of March 1, 1889, between the United States and M and, relying upon those treaty provisions, requested that the U States Government prevent the erection and operation of a da company known to the complainants as the "Rio Grande Irri Company," at Elephant Buttes, N. Mex., about 125 miles abov del Norte, designed to store all the surplus waters of the riv turn it into irrigating ditches and canals.

The complaint of Mexico was sent August 8, 1896, to Col. Mills, of the United States Army, who was then engaged, unc direction of this Department, in an investigation of the volu water in the Rio Grande and the feasibility of a plan, under eration by both Governments of erecting an international res Colonel Mills reported, November 17, 1896, that the erection dam at Elephant Buttes and of other dams below there, whi same company contemplated building, would stop practica the water coming into the Rio Grande above those points. Th plaint and Colonel Mills's report were referred to the Secretary Interior November 30, 1896, with a view to ascertaining whethe was any legal power to cancel the rights claimed by the said tion company, and if the power to cancel existed, whether it c exercised without injustice to the parties directly or indirectly ested in the enterprise. The Secretary of the Interior had bee viously requested to suspend temporarily all applications for of way to build dams across the river in all pending cases. ber 5, 1896, he suspended the applications not already approv in a letter of December 19 said, with reference to the dam at El Buttes to be built by the corporation referred to in the Mexica

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The Secretary of the Interior is, for the reason above given, power-
is to intervene or inquire further into the lawfulness of the pro-
sed dam across the Rio Grande at Elephant Buttes. The act of
ly 13, 1892 (27 Stat. L., 88–100), provides, however (in section 3,
ending section 7 of the act of September 19, 1890):

That it shall not be lawful to build any wharf, pier, dolphin, boom, dam, weir,
akwater, bulkhead, jetty, or structure of any kind outside established harbor
s, or in any navigable waters of the United States where no harbor lines are
may be established, without the permission of the Secretary of War, in any
t. roadstead, haven, harbor, navigable river, or other waters of the United
tes, in such manner as shall obstruct or impair navigation, commerce, or
horage of said waters; and it shall not be lawful hereafter to commence the
struction of any bridge, bridge draw, bridge piers and abutments, causeway,
other works over or in any port, road, roadstead, haven, harbor, navigable
r or navigable waters of the United States under any act of the legislative
mbly of any State until the location and plan of such bridge or other works
e been submitted to and approved by the Secretary of War, or to excavate or
or in any manner to alter or modify the course, location, condition, or capacity
ny port, roadstead, haven, harbor of refuge, or inclosure within the limits of
breakwater, or of the channel of any navigable water of the United States,
ss approved and authorized by the Secretary of War.

ection 10 of the act of September 19, 1890 (26 Stat. L., 426–454),
vides:

at the creation of any obstruction, not affirmatively authorized by law, to the
igable capacity of any waters in respect of which the United States has juris-
ion is hereby prohibited. The continuance of any such obstruction, except
ges, piers, docks, and wharves, and similar structures erected for business
poses, whether heretofore or hereafter erected, shall constitute an offence, and
week's continuance of any such obstruction shall be deemed a separate
ce. Every person and every corporation which shall be guilty of creating or
inuing any such unlawful obstruction in this act mentioned, or shall violate
provisions of the last four preceding sections of this act, shall be deemed
ty of a misdemeanor, and on conviction thereof shall be punished by a fine not
eding five thousand dollars, or by imprisonment (in the case of a natural per-
not exceeding one year, or by both such punishments in the discretion of the
t. The creating or continuing of any unlawful obstruction in this act men-
ed may be prevented and such obstruction may be caused to be removed by
njunction of any circuit court exercising jurisdiction in any district in which
obstruction may be threatened or may exist; and proper proceedings in
ty to this end may be instituted under the direction of the Attorney-General
he United States.

s the proposed erection of this dam across the Rio Grande at Ele-
nt Buttes has given rise to an important and perplexing interna-
al question, I have the honor to inquire whether the parties
aged in this enterprise, or others whose rights they enjoy, have
ained from you, as Secretary of War, the permission required by
act first above quoted. If your permission has not been obtained
the placing of this obstruction across the Rio Grande River, I
ve the honor to request that you will ascertain whether the river,
the parts which will be affected by the dam and the diminution of
volume of the water consequent upon its erection, is not a navi-
ble water of the United States within the meaning of the statutes
ve quoted, so as to make your sanction a necessary prerequisite
he lawful erection of the dam. I have received information tend-
to show that the Rio Grande River is navigable for commercial
poses between the United States and Mexico, and possibly between
State of Colorado and the Territory of New Mexico. It probably
not float water craft of great size; but I understand that it has
n used in the timber commerce of the country, and is, in its nat-
state, capable of regular, periodical, if not perennial, use as a

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it is naturally capable of affording for commercial traffic betwee
States or between any portion of the United States and Mexico.

Section 10 of the act of September 19, 1890, is a general prov
enforcible in the courts under the direction of the Attorney-Ge
of the United States, and his aid would necessarily be invoked b
should you determine to put this provision of law in force again
Rio Grande Dam and Irrigation Company's obstruction of the
at Elephant Buttes. In this connection I desire to call your
tion to an opinion of the Attorney-General delivered Decemb
1895 (20 Op. Att. Gen., 274), in which he holds that the Rio G
is not a navigable river above a point 150 miles below Paso del
in so far as the treaty obligations of the United States with M
are concerned. He did not consider the question whether the
where it lies wholly in the United States is a navigable water
United States within the meaning of the Federal Statutes. This
question is, I believe, a new one, dependent upon facts yet not
ascertained, facts which I have no doubt your Department can r
obtain and furnish to the Attorney-General in case they, in
opinion, justify or require the intervention of his office.

To put you in a more complete possession of the facts relat
the dam at Elephant Buttes, I inclose copy of the letter of the
tary of the Interior, dated September 19, 1896, referred to abov
of the accompanying report of the Assistant Attorney-General
Interior Department. From these papers it appears that the
tary of the Interior has acted upon the assumption that the Rio G
River above the boundary line is not a navigable river of the U
States, without requiring proof or otherwise ascertaining that it
navigable.

I have the honor to be, sir, your obedient servant,

RICHARD OL

INDORSEMENTS ON LETTER OF MR. OLNEY TO SECRETARY OF WAR,
JANUARY 13, 1897.

[Second indorsement.]

OFFICE OF CHIEF OF ENGINEERS, UNITED STATES ARMY,
January 25, 1897.

pectfully referred to Capt. George McC. Derby, Corps of Engineers, who will furnish such information on the subject as may be in his possession and rd the papers to Maj. A. M. Miller, Corps of Engineers, at Galveston, Tex.

A. MACKENZIE,
Acting Chief of Engineers.

[Third indorsement.]

UNITED STATES ENGINEER'S OFFICE,
No. 1 Prytania street, New Orleans, La., February 1, 1897.

pectfully forwarded to Maj. A. M. Miller, Corps of Engineers, in compliance he preceding indorsement. Report herewith.

GEO. MCC. DERBY,
Captain of Engineers, United States Army.

[Fourth indorsement.]

UNITED STATES ENGINEER'S OFFICE,
Galveston, Tex., February 5, 1897.

pectfully returned to the office Chief of Engineers, United States Army, with of this date.

A. M. MILLER,
Major, Corps of Engineers.

[Fifth indorsement.]

OFFICE CHIEF OF ENGINEERS, UNITED STATES ARMY,
February 11, 1897.

Secretary of State brings to the attention of the Department a petition of an citizens, submitted by the Mexican minister, protesting against the derate use of the waters of the Rio Grande and its tributaries by residents of Mexico and Colorado. This petition is specially directed against the erection peration of a dam by a company known as the "Rio Grande Dam and Irri- Company," at Elephant Buttes, New Mexico, about 125 miles above Paso orte, designed to store all the surplus water of the river and turn it into ting ditches and canals.

ppears that authority to build this dam has been granted by the Secretary of terior: that its proposed erection has given rise to an important and perplex- ternational question; that the revocation of the authority is desirable, but he Secretary of the Interior is powerless under the law to revoke the action Department.

h a view to securing the intervention of the War Department, the Secretary te calls attention to the provisions of section 3 of the act of Congress of July 2, and of section 10 of the act of September 19, 1890, and inquires whether rties engaged in the aforesaid enterprise, or others whose rights they enjoy, obtained from the Secretary of War the permission required by the first- l act, and, if such permission has not been obtained, he requests that the ary of War will ascertain whether the river in the parts which will be d by the dam and the diminution of the volume of water consequent upon ction is not a navigable water of the United States within the meaning of ws referred to, so as to make the sanction of the Secretary of War a neces- rerequisite to the lawful erection of the dam. In case the Rio Grande Dam rigation Company, or persons exercising the rights obtained by that com- are, without the permission required by the act of July 13, 1892, building ut to build a dam across a navigable river of the United States in a manner ill obstruct or impair the use of that river as a highway for commerce n the United States and Mexico or between the States of the Union, the ary of State requests that the aid of the Attorney-General be invoked to put ovisions of section 10 of the act of September 19, 1890, in force against the mpany.

r as the records of this office show, no permission has been granted by the ary of War to the Rio Grande Dam and Irrigation Company or any other ation to build a dam at Elephant Buttes, or at any other point on the Rio a.

Brigadier-General, Chief of Engin

[Sixth indorsement.]

WAR DEPARTMENT, *February 12,*

Respectfully referred to the Adjutant-General for reference to Colonel for such information as may be in his possession concerning the matter i tion. An early report is desired.

By order of the Secretary of War.

J. B. RANDOLPH, *Acting Chief C*

[Seventh indorsement.]

WAR DEPARTMENT, ADJUTANT-GENERAL'S OFFICE
Washington, February 13,

Respectfully referred to Col. Anson Mills, Third Cavalry, commissioner United States, Water Boundary Commission of the United States and Mexic Dupont Circle, Washington, D. C., for such information as may be in his sion concerning the matter in question. An early reply is desired.

By order of the Secretary of War.

J. C. GILMORE
Assistant Adjutant-Ge

[Eighth indorsement.]

WASHINGTON, *February 15,*

Respectfully returned to the Adjutant-General of the Army, with the st that this matter was referred to me by the honorable the Secretary of St communication dated January 4 last; and that in a letter dated January 7 of which I inclose herewith, I gave him all the information I possessed th appeared to me as pertinent to the question at issue. It has since occurre however, that from my knowledge of the character, condition, and regime Rio Grande, I should have added some facts and circumstances surrounding question that render it unique compared with other of our rivers that h authoritative consideration by any branch of the Government in the m navigation.

In all previous considerations, I dare say that the questions were entirel that is to say, that the structures described and forbidden in the act of Se 19, 1890, to "obstruct or impair navigation," has been considered only wit ence to the obstruction that the structure itself gives to the passage at t where erected, while in the case of the "Rio Grande Irrigation Compa the other similar companies which seek similar privileges the structure th

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ion, which will be still further impaired by the diversion of the waters as posed.

submit, therefore, whether this case is not so unique as to require, under the rit of the law, a different and broader consideration, namely, as a river entire m the location of the proposed dam to the Gulf; to determine in fairness ether the proposed dam would "obstruct or impair" a navigable river of the ited States.

also inclose copies of act of Congress approved July 28, 1882, and September 6, 3, authorizing bridges across the Rio Grande at El Paso, which appear to ognize the navigability of the river at that point.[1]

ANSON MILLS,
Colonel Third Cavalry, Commissioner.

LETTER ACCOMPANYING THIRD INDORSEMENT.

UNITED STATES ENGINEER'S OFFICE,
3232 Prytania Street, New Orleans, La., February 1, 1897.

:. Gen. WILLIAM P. CRAIGHILL,
Chief of Engineers, United States Army, Washington, D. C.

ENERAL: I have the honor to report as follows, in compliance with your indorse- t of January 25, 1897, directing me to furnish such information as may be in possession on the subject of the navigability of the Rio Grande River, as affect- the validity of the claim to the right to dam the river at Elephant Buttes e by the Rio Grande Dam and Irrigation Company.

ich knowledge as I have of this subject has come to me through my having ed since last May as engineer member of the International (Water) Boundary mission in the consideration of questions pertaining to the use of the waters ie Rio Grande and the project of an international dam at El Paso.

ie flow of water in the Rio Grande at and near El Paso is exceedingly variable. re are months in the year when there is no flow at all, and at other times the thly flow is as great as 12,000 cubic feet per second. The periods of high er recur annually with regularity, and at such times the river is unquestion- navigable at and above El Paso, and could certainly be used in commerce for ing logs and flatboats. I have no knowledge of the fact that this portion of river has ever been put to such use, the country being but sparsely settled and ber being exceedingly scarce. But the issue is not whether the river has been ually navigated, but whether it is navigable within the meaning of the law, hat it can be classified as navigable waters of the United States, entitled to protection of the Secretary of War, under the act of September 19, 1890.

s many rivers of the country have been so classified which in point of depth, ume, and regularity of flow offer fewer advantages to navigation than does Rio Grande at El Paso, it seems clear to me that this stream should also be classified.

Further, it would appear from the inclosed papers that it has heretofore been ided that the Rio Grande is navigable at and below a point 150 miles below Paso, and since the river receives no important tributaries within this 150 miles its course, it is manifest that a dam at Elephant Buttes which would entirely p the flow at El Paso would necessarily injuriously "modify the capacity of channel" of the river in that part of its course where it has heretofore been l to be navigable.

rom either of these standpoints it would appear that the plans of the Rio Grande n and Irrigation Company required the approval and authorization of the Sec- ry of War.

Very respectfully, your obedient servant,

GEO. McC. DERBY,
Captain of Engineers, United States Army.

LETTER ACCOMPANYING FOURTH INDORSEMENT.

UNITED STATES ENGINEER'S OFFICE,
Galveston, Tex., February 5, 1897.

it. Col. A. MACKENZIE,
Acting Chief of Engineers, Washington, D. C.

OLONEL: In compliance with your letter of January 25, 1897, in reference to ain information in reference to the effects of a dam proposed to be erected in Rio Grande at Elephant Buttes, New Mexico, I would state as follows:

e only information in the possession of this office in reference to the Rio

[1] Public document.

River receives little or no attention from them. Any scheme which would m
against the withdrawal of water for irrigation purposes would not be rec
with favor. They are provided with good railway facilities. In my judgm
the stream is not worthy of improvement by the General Government."

Mr. Gerald Bagnall, assistant engineer, who made the examination, com
this conclusion in his report:

"The people of the valley take no interest in the question of navigation o
Rio Grande, but the problem of how to store its waters for irrigation purpo
one which they consider of vital importance to the prosperity of that section

"In conclusion, I will say that I consider the construction not only of an
river channel but of any navigable channel to be impracticable. There is a
stage of water in the river during the months of May and June, when the cu
must, in many places, especially in the cañons, become almost a torrent. I
valleys this is caused not only by the increased volume of water but also
shortening of the channel where it cuts across the sandpits, around which it
during low stages. During the greater part of the year, when the river is
the discharge would be insufficient to supply any navigable channel, except
haps a narrow canal with locks, the construction of which on a foundation of
in places 40 feet deep, would be financially, if not physically, impracticable."

From the above it would appear that at the time of the examination by M
Ernst the Rio Grande above El Paso was not considered a navigable stream
only looked on as a means of irrigation. There is, however, I am inform
short period of high water when it is possible to raft or use flatboats in this
of the Rio Grande.

The papers from the State Department are returned herewith, and a r
received from Captain Derby, Corps of Engineers, is also forwarded.

Very respectfully, your obedient servant,

A. M. MILLER,
Major, Corps of Engine

DATA NOT ORIGINAL

:ORRESPONDENCE TOUCHING AND THE PROCEEDINGS OF THE INTERNATIONAL COMMISSION ON THE SUBJECT OF THE EQUITABLE DISTRIBUTION OF THE WATERS OF THE RIO GRANDE.

DEPARTMENT OF STATE,
Washington, May 13, 1896.

'ol. ANSON MILLS, U. S. A.,
Commissioner, etc., El Paso, Tex.

SIR: I transmit herewith copies of instruments in English and panish, one signed by Mr. Romero, the Mexican minister at this ıpital, on behalf of Mexico, and one by myself, on behalf of the 'nited States, empowering Mr. Osorno, the chief of the Mexican com- ıission, and yourself to examine and report upon certain questions ıvolving the equitable distribution and use of the Rio Grande etween the two Republics.[1]

I understand that Mr. Romero has brought to the notice of Mr. 'sorno the texts of this instrument, with a view to its prompt fulfill- ıent. I shall, however, out of abundant caution, and following the ıggestion in my note to Mr. Romero, inclose a copy of both texts to [r. Osorno for his full and complete information.

It is the desire of both Governments that the subjects mentioned in ıe commissions herewith be prosecuted without unnecessary delay ı a completion within the stipulated period of eight months from [ay 6, 1896. The concluding part of these commissions contemplates ıat you and your colleague, in case of agreement as to results, "shall ıake a joint report to each Government, and if they disagree, and ı far as they disagree, shall make separate reports to each."

Commending the subject to your careful and earnest consideration, ıd enjoining prompt and energetic action, I am, sir, your obedient ırvant,

RICHARD OLNEY.

EL PASO, TEX., *November 25, 1896.*

on. SECRETARY OF STATE,
Washington, D. C.

SIR: I have the honor to submit herewith the report of the joint mmission on the investigations into the distribution of the waters the Rio Grande and the construction of a dam and reservoir near Paso, Tex., with the following inclosures:

1. Letter of Mr. E. P. Ripley, president of the Atchison, Topeka

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[1] For copy of protocol see p. 1 of Journal of August 17, 1896.

and Santa Fe Railway Company, submitting a proposition to remove his roadbed from the proposed reservoir.

2. Letter of Mr. J. Kruttschnitt, general manager of the Southern Pacific Railway Company, making a similar proposition with reference to his roadbed.

3. Letter from Messrs. Magoffin, Zimpelman & Crosby, and a separate letter from Mr. Magoffin, naming a price upon about 7,000 acres of land to be submerged.

4. Joint report of the engineers of the respective countries regarding the technical investigations on the subject, with accompanying appendixes and maps.

In explanation of the large excess of the present estimates, compared with that of the preliminary investigations made in 1889, I beg to make the following remarks:

First. President Ripley has increased Mr. Follett's estimate about $98,000 for the removal of the Santa Fe road. Mr. Ripley, however, claims $48,000 as compensation for increased maintenance by the increase of the number of bridges, etc., over the many ravines.

I am satisfied, however, and I believe that Mr. Ripley will be so satisfied, that the maintenance of these trestles will be no greater from year to year than the present cost of riprapping against the encroachments of the river and ballasting in the soft bottom lands. I am of the opinion that on further examination Mr. Ripley will be willing to remove his road at Mr. Follett's estimate. However, I have thought best to place his figures in the estimates to insure a sufficiency of funds.

Second. Mr. J. Kruttschnitt's (general manager of the Southern Pacific Railway Company) estimates are more difficult of explanation, because he has given no items and has made a large increase over Mr. Follett's estimates. However, there is no doubt but the principal increase is due to a necessary new bridge. When Mr. Follett made his estimate there was an old wooden bridge, about worn out, which the road was contemplating moving, and has since replaced by an iron and stone structure at large cost. This will have to be torn down and a new one built of larger dimensions, some 22 feet higher, and while Mr. Kruttschnitt does not state so, I think he has made an estimate for a very expensive bridge, for otherwise I think the road could be moved for something very near Mr. Follett's estimate. However, I have thought best in this case also to place the amount at Mr. Kruttschnitt's figures.

Third. The increase in the estimate for the condemning of the land is partly accounted for by the fact that the limekiln, which was estimated by Mr. Follett at $1,000, has since become a very valuable plant, supplying the Kansas City smelter at this place. There are many valuable buildings and works, which probably cost about $30,000 or $40,000, all of which will probably have to be submerged, and then farther above there is a brick factory which cost several thousand dollars. The land itself (about 27,000 acres) is not worth over $3 or $4 an acre in the public market, and the title to about 10,000 acres to be submerged in New Mexico is on unconfirmed grants, the title probably still resting in the United States, in which case it would cost nothing; but in this case also I have thought best to estimate that it would have to be bought and paid for, and that in the course of condemnation the owners would get larger prices for their land than it is actually worth.

Fourth. Regarding the dam proper, it is the most disappointing

feature in the whole investigation, for the reason that the bed rock was found so much farther below the surface than was anticipated, entailing extraordinary expense. The depth ranges from 44 to 87 feet across the gorge, 500 feet wide, filled with sand and gravel through which the water readily percolates, and it is not at all probable that open cofferdams could be sunk to that depth, as the pressure would be from two to three atmospheres, at the bottom about 40 pounds to the square inch, which would force the water and fine sand through underneath faster than it would be practicable to pump it out; hence it will be necessary to hold the water and sand back by pneumatic pressure in closed cofferdams or caissons, or some other similar method, which is the principal cause of the great increase in expense of the dam over the former estimate. Of course the increased depth of the bed rock increased the total height of the dam, largely increasing the number of cubic yards of masonry. Mr. Follett estimated 47,000 cubic yards; this estimate calls for 93,000 cubic yards. Mr. Follett's estimated cost was $4.50 per yard; the present engineers have just about doubled it. This increase in the expense of the masonry is understood to provide for the expense of the caissons and cofferdams, and is about $400,000, which ought to be amply sufficient. I think some of the engineers' estimates are excessive, but taking it all in all, I do not believe the estimate as a whole to be so.

I consider the description (on page 5 of the engineers' joint report) of the land proposed to be ceded to Mexico as too indefinite and uncertain to be incorporated in a treaty, for the reason that it takes as its initial point the "middle" of a very small railroad bridge across a ravine, which bridge is to be removed and the locality submerged by the waters of the reservoir, and makes no specific connection with the international boundary. I would suggest as a better description the following: Beginning at a point where the parallel of 31° 47′ intersects the middle of the deepest channel of the Rio Grande; thence west through the initial monument, No. 1, of the international boundary line between the United States and Mexico, and along said parallel (the boundary) about 1,312 feet; thence due north along the meridian to its intersection with the deepest channel of the Rio Grande; thence down said deepest channel of the Rio Grande with its meanders to the place of beginning, containing about 100 acres.

This estimate is a very large sum, indeed, and I doubt very much whether Mexico has been injured by the United States in depriving them of their vested rights in the water to that extent; but it is such a problematical question that it will be utterly impossible to ever arrive at any degree of accuracy as to how much they have been injured. It is certain, however, that they have been wronged pecuniarily to a very large extent, and the future will continue to entail more in a progressive ratio until the matter is settled.

My first impulse was to insist that Mexico should share a portion of the pecuniary burden; but, in the first place, the Mexican commissioner would not agree to this, which would compel separate reports, and, in the second place, if Mexico did share in the expense she would expect to share in the control of the construction, and as a double administration between any different people would invariably prolong the work and increase the cost, it is particularly so in this case, where the methods of the two peoples are so different. I think, therefore, even if Mexico were willing to share to the extent of $400,000 or $500,000, under a joint construction, it would be economical for the United States to take it alone and bear all the burden.

EL PASO, TEX., *August 17,*

In this city at the county court-house of El Paso County, Tex., Col. Ansot and Señor Don F. Javier Osorno, the first named commissioner on the the United States, and the second commissioner on the part of Mexico, compliance with the requirements of the following agreement between the Governments, dated Washington, May 6, 1896:

"It being essential to the conduct of the negotiations contemplated by t current resolution of Congress of April 29, 1890, that there should be a d and authoritative ascertainment of the facts relating to the irrigation of t lands in the valley of the Rio Grande River, to the construction of a dam said river at El Paso, Tex., and to the other subjects-matter of said resolut

"And the Mexican Government, deeming that it is of vital interest Republic and especially for the inhabitants of the right bank of the Rio (Grande) to contribute for their part to preparing the means for carrying negotiations recommended in the aforesaid resolution of the Congress of the States of America;

"Col. Anson Mills and Señor Don F. Javier Osorno, members of the I tional Boundary Commission, organized under the convention of March are hereby requested and directed to investigate and report, as soon as prac upon the questions and matters following, to wit:

"1. The amount of water of the Rio Grande taken by the irrigation constructed in the United States of America.

"2. The average amount of water in said river, year by year, before t struction of said irrigation canals and since said construction—the prese included.

"3. The best and most feasible mode, whether through a dam to be cons across the Rio Grande near El Paso, Tex., or otherwise, of so regulating of the waters of said river as to secure to each country concerned an inhabitants their legal and equitable rights and interests in said waters.

"It is understood that the said Anson Mills and the said Señor Don F. Osorno will also be requested and directed to perform the duties herei described on behalf of the Governments of the United States and Mexic each Government shall be at liberty to aid and facilitate the work to be plished by the employment of such engineers, clerks, and other agents as see fit; that the said Col. Anson Mills and the said Señor Don F. Javier Os they agree upon results, shall make a joint report to each Government; they disagree, and so far as they disagree, shall make separate reports t and that eight months from this date.

"Washington, May 6, 1896.

"RICHARD O

"M. ROMERO

or this work, and as all the members of the commission understand English, it ras then agreed, first, that the records shall be kept in the English language only, ne record by each commission, which shall be duly signed by each commissioner nd attested by their secretaries; second, that the engineer's reports, either joint r separate, shall be handed to the commissioners on or before December 6, 1896, ı order that the commissioners may have them and use them in framing their eport to their respective Governments before January 6, 1897.

The work before the commission was then distributed as follows: The commisioners to take up and as far as practicable complete—

1. Acquire options from the owners for as much of the 27,000 acres of land proosed to be submerged as possible.

2. By correspondence, try to secure from the Southern Pacific and Atchison, 'opeka and Santa Fe railway companies propositions to move their roads out of he bed of the proposed reservoir for a stipulated sum from the Government.

3. By correspondence, through the State Department, to endeavor to get from he State of Texas a cession of jurisdiction to the Federal authorities over that ortion of the lands to be submerged that lie in Texas in order that the process of ondemnation may be simplified by all going through the same courts—the Federal.

4. By correspondence, through the State Department, to endeavor to restrain, ither by present or future laws to be enacted by Congress, the people of New Mexico from building the numerous dams and reservoirs that have been projected by the Geological Survey in that Territory in the bed of the Rio Grande and its tributaries. This restraint to be only so far as the appropriation of waters by these proposed dams and reservoirs might interfere with the present vested rights in Mexico and Texas below the proposed dam.

5. By correspondence, through the State Department, to endeavor to get a cession of about 100 acres of land from the United States to Mexico, in case the dam should be constructed as now proposed, so that one end of it should be located on Mexican soil.

The engineers to take up, and as far as practicable, complete the following:

1. Locate the site for the proposed dam.

2. Develop thoroughly the bed rock.

3. Make one or more working plans, with estimates of cost in detail for the dam itself and all appurtenances, such as by-wash and outlets.

4. Survey and make an accurate map of whatever land may be necessary to cede to Mexico, in order that Mexico may possess one end of the dam on her own territory.

5. Make thoroughly all investigations practicable, as to flow of the waters at different points on the Rio Grande and its tributaries, as contemplated in the agreement between the Governments.

6. Enumerate and measure all the ditches and reservoirs that are now taken from the Rio Grande and its tributaries and measurement of flow, as far as practicable, and determine theoretically as far as possible the question whether or not, after these ditches and reservoirs are supplied, the present flow of the river will maintain the proposed reservoir year by year.

After long and informal discussion between the engineers, they proposed the following plan of operations, which was adopted: The Mexican commission taking the larger part of the work, by reason of the fact that the United States has already done a very considerable amount of preliminary work, and the further fact, the funds now available for the United States commission are limited.

Mr. W. W. Follett, assistant engineer on the part of the United States, who knows thoroughly the Rio Grande and its tributaries, to go to Denver and the valley of the Rio Grande, accompanied by one of Mr. de Ibarrola's assistants, to collect such information as is possible relative to the amount of water taken from the Rio Grande; the storage reservoirs existing and proposed, and the flow of the river.

The Mexican engineers to at once make a careful topographical survey of the gorge from the railroad bridge to a point where it widens out into the valley, and where the dam is proposed to be constructed.

2. To have a series of borings of such necessary depth to which it will be practicable to construct the dam.

3. To then make a thorough investigation of all localities where hard bottom is found, sinking a sufficient number of well holes and trial pits to determine fully the character of the foundation available, so as to furnish data for the preparation of plans and specifications for the dam, the United States engineer to be present at the sinking of the well holes and pits, when practicable.

4. To take such additional observations as may be practicable as to the silt-carrying capacity of the river, should there be any flow of the river up to November.

the United States commission, the earliest opportunity practicable, owing
illness of the United States commissioner since the 17th of August.

The Joint Commission then proceeded to indite the following letters of i
to the respective presidents of the Atchison, Topeka and Santa Fe and So
Pacific Railway companies:

EL PASO, TEX., *September 8,*

To the president of the Atchison, Topeka and Santa Fe Railway Company.
(Through Mr. Copeland, agent, El Paso, Tex.)

DEAR SIR: The undersigned, Anson Mills, commissioner for the United
and F. Javier Osorno, commissioner for Mexico, duly authorized and app
by their respective Governments to acquire information and formulate a
for presentation to Congress, through the State Departments of each count
the building of an international dam and reservoir at this place, as per the in
copy of an agreement between Mr. Olney, Secretary of State for the United
and Mr. Romero, minister for Mexico, have found as one of the things nec
the ascertainment of the cost of the removal of your road from the bed
proposed reservoir. We inclose you herewith the printed report of Colone
and the railroad engineer, Mr. Follett, containing a preliminary survey
present Santa Fe road bed and the proposed location for its removal.

Mr. Follett, in this survey, made estimates of the cost of removal as
observed, but it is fair to say that this was only preliminary and probably
in excess of the actual cost of removal at this time, the survey having bee
seven years since.

We want to ask you to make a proposition to us for a stated sum for re
your road without the bed of the lake, this proposition to be received by
to December 1, 1896.

We are compelled to ask for this estimate thus hastily for two reason
because the time allotted to us for our report to the Governments is not n
ficient for our commission or the railroad company to make a detailed sur
estimate, and second, because if we had time to make such a survey ours
is not probable that the location we should select would be as satisfactory
selected by the road itself.

We have here belonging to Mr. Follett's printed report his complete fie
and profiles, and we suggest that, if practicable, you send an engineer of yo
selection to take up his work at any point on its line and resurvey it for su
tance as might be necessary in your opinion to establish the correctnes
work and estimates, and from that make your proposition to remove th
Mr. Follett can be found here working on the dam and other investigation
sary for its construction.

Your vice-president, Mr. Morton, some time since asked for information
ing this matter, and we furnished through Mr. Copeland a partial state

DATE NOT CIRCULATE

EL PASO, TEX., *September 8, 1896.*

the President of the Southern Pacific Railway Company.
(Through Mr. Martin, superintendent, El Paso, Tex.)

DEAR SIR: The undersigned, Anson Mills, commissioner for the United States, d F. Javier Osorno, commissioner for Mexico, duly authorized and appointed their respective Governments to acquire information and formulate a treaty · presentation to Congress, through the State departments of each country, for e building of an international dam and reservoir at this place, as per the inclosed py of an agreement between Mr. Olney, Secretary of State for the United States, d Mr. Romero, minister for Mexico, have found as one of the things necessary e ascertainment of the cost of the removal of your road from the bed of the pro-sed reservoir. We inclose you herewith the printed report of Colonel Mills and e railroad engineer, Mr. Follett, containing a preliminary survey of the present uthern Pacific roadbed and the proposed location for its removal.

Mr. Follett in this survey made estimates of the cost of removal, as will be served, but it is fair to say that this was only preliminary and probably largely excess of the actual cost of removal at this time, the survey having been made ren years since.

We want to ask you to make a proposition to us for a stated sum for removing ur road without the bed of the lake, this proposition to be received by us prior December 1, 1896.

We are compelled to ask for this estimate thus hastily for two reasons, first, cause the time allotted to us for our report to the Governments is not now ficient for our commission or the railroad company to make a detailed survey d estimate, and second, because if we had time to make such a survey ourselves is not probable that the location we should select would be as satisfactory as e selected by the road itself. We have here, belonging to Mr. Follett's printed ort, his complete field notes and profiles, and we suggest that, if practicable, u send an engineer of your own selection to take up his work at any point on line and resurvey it for such distance as might be necessary, in your opinion, establish the correctness of his work and estimates, and from that make your position to remove the road. Mr. Follett can be found here working on the m and other investigations necessary for its construction.

Please address your reply to No. 2 Dupont circle, Washington, D. C.

Very respectfully, yours,

ANSON MILLS,
United States Commissioner.
F. JAVIER OSORNO,
Mexican Commissioner.

The United States commissioner then stated that he agreed and approved of the ction of the Mexican commissioner in his (the Mexican commissioner's) approval f the programme of the engineers of both commissions, made during the illness f the United States commissioner.

The joint commission then adjourned, to meet as soon as the secretaries shall ve obtained the necessary information regarding the lands proposed to be sub-erged, to aid in getting options thereon.

ANSON MILLS.
JOHN A. HAPPER.
F. JAVIER OSORNO.
S. F. MAILLEFERT.

EL PASO, TEX., *November 25, 1896.*

The engineers having signified their willingness to submit their joint report, as uired in the joint journal of August 17, on the distribution of the waters of the o Grande (Bravo) and the proposed international dam above El Paso, Tex., the nt commission met at 10 a. m. at the office of the United States commissioner the purpose of receiving their report thereon and the final consideration of the estions submitted to the joint commission in the agreement between the Secre-y of State for the United States and the Mexican minister at Washington, ed May 6, 1896.

The engineers for each Government then presented to the joint commission oint report duly signed by each, which is appended hereto and described as lows:

First. The joint report of the two engineers of this date.

Second. The subreport of Civil Engineer W. W. Follett on the part of the United tes.

canals at this date has increased to 925, irrigating 318,000 acres of la
in New Mexico there were, prior to 1880, 563 canals taken from the
and its tributaries, irrigating 183,000 acres of land, and at the presen
are 603 canals, irrigating 186,000 acres of land.

These results show an aggregate of 1,074 canals taken out in Colora
Mexico prior to 1880, and 1,528 taken from the river and its tribut
date, showing an increase of 454 canals and of 196,000 acres irrigated
of Colorado and Territory of New Mexico. This shows quite ac
increase for the past sixteen years. There are no reliable records av
ing the increase in the preceding years, but they were doubtles
rapidly increasing ratio.

It will also be observed that the greatest increase during these sixte
in the State of Colorado, the number of canals and acres irrigate
almost stationary in New Mexico for that period, but this is easily a
by the fact that the appropriation of water in Colorado has rendered
city in New Mexico that little further increase of canals and acreage w

It is evident to the commissioners that as the flow of water in the
had not only become scarce at El Paso, but high up in New Mexico pr
1889, any increase of water used in Colorado would diminish materi
at El Paso during the irrigation season.

The foregoing seems to the commissioners to be as intelligent an an
ticable to the first section of the agreement submitted to them, abov

The commissioners then took up the second section of the abo
agreement, which reads as follows:

"The average amount of water in said river year by year before
tion of said irrigation canals and since said construction, the present ye

There are no records or testimony available which will enable the
ers to determine this question entire, with any degree of accuracy.
ord of the flow of the river here at El Paso was taken in 1889, the d
to that date, the river being dry as far above as Albuquerque, N.
water passing El Paso for four months during the year, embracing
tember, October, and November. There is no tradition of such scar
prior to this date—1889—the river only being dry once in about seve
then only for a short period in the latter part of the summer.

For the eleven months prior to March 31, 1890, the flow of the riv
was 425,000 acre-feet; this includes the long drought of 1889 befor
For the year ending March 31, 1891, the flow was 1,100,000 acre-feet.
1892 the flow at El Paso was 1,850,000 acre-feet. For the year 1893
875,000 acre-feet.

During a part of this time measurements at Embudo in the Rio
the Colorado line showed that the flow at that point was greater tha

DOES NOT CIRCULATE

have been dry for a great part of the irrigating season three years out of the five past.

The foregoing is a condensed compendium of the large mass of information and statistics taken by our engineers, from which we form the following conclusions:

That the flow of the river at El Paso has now been decreased by the taking of water for irrigation by canals constructed in the United States of America, about 1,000 second-feet for one hundred days annually, equal to 200,000 acre-feet of water.

It will be observed that this loss is distributed through the summer flow, which at best was not always sufficient before the diminution took place during dry seasons.

It should be understood that the great mass of these waters both before the construction of the canals and since consists of flood waters carried down the river unused, being utterly unavailable without large reservoirs to hold it for the season of irrigation, the maximum flow lasting but a few days, running as high as 16,000 second-feet, generally before the irrigation season fully sets in, and an average flood of about 5,000 second-feet during about forty or fifty days in April and May.

The commission then proceeded to the consideration of the third section of the agreement before referred to, which reads as follows:

"The best and most feasible mode—whether through a dam to be constructed across the Rio Grande near El Paso, Tex., or otherwise—of so regulating the use of the waters of said river as to secure to each country concerned and to its inhabitants their legal and equitable rights and interests in said waters."

The joint report of the engineers develops a feasible method of building a dam across the Rio Grande near El Paso (about 3 miles above) and impounding a large mass of the flood waters in a lake some 15 miles long by about 3½ miles wide, which it is believed by the commission will so regulate the use of the waters of said river as to secure to each country concerned and to its inhabitants their legal and equitable rights and interests in said waters, and neither they nor the commissioners have been able to discover any other feasible mode of consummating these ends.

The joint commission is of the opinion that the present flow of the river is sufficient to maintain the reservo r as projected, but insufficient to maintain it and at the same time maintain the projected reservoir 120 miles above El Paso, in New Mexico, known as the Elephant Buttes dam and reservoir. One of these projects, in the opinion of the commission, must give way to the other, or at least, if both are built, that at Elephant Buttes must in some way be restrained from using water already appropriated by the citizens of the El Paso Valley, both Mexicans and Americans; and a method provided in case they violate these restraining rules for a prompt and efficient legal remedy for the parties injured.

The investigations for the bed rock on which to found a masonry dam have been difficult and prolonged, but at last a suitable site has been discovered by Señor Don. J. Ramon de Ibarrola, chief of the special section for Mexico, who conducted these and the topographical investigations. The depth of the rock is at such a distance from the surface—the deepest place being about 90 feet—that it will entail much greater cost in the construction than was anticipated by the preliminary examination that had been heretofore made. However, its construction is perfectly feasible and only a question of cost.

At this point both banks of the river are in United States territory, but a very short distance from the boundary line between New Mexico and Mexico, and it is proposed if the dam be constructed that a cession of some 98 acres be made by the United States to Mexico, the metes and bounds of which are fully described in the engineer's report, so that Mexico may own one end and half of the dam and have access to the lake, for the very obvious purpose of conducting its share of the waters impounded through its own territory to its own lands to be irrigated. This land is practically worthless to the United States, being steep mountain sides of almost solid rock; but this cession should be made in such a manner as to effectually guard the rights of the Southern Pacific Railway Company as an American corporation.

It is no part of the purpose of this project to construct canals from the dam on either side: the water to be delivered to the local authorities of each nation through gates in the dam proper.

It is the opinion of the Joint Commission that Mexico has been wrongfully deprived for many years of a portion of her equitable rights in the flow of one-half of the waters of the Rio Grande at the time of the treaty of Guadalupe Hidalgo; and if there were no other evidence of that fact than the records and measurements above referred to, it is apparent to the eye of any visitor to the

locality, where can be witnessed the dying fruit trees and vines, the aband fields and dry canals for the greatest portion that has heretofore been cultiv and while we are considering the equitable rights of Mexico, this is also tr the United States side, where almost the same abandonment and destructi former prosperous farms may be witnessed.

The joint commission is of the opinion that the impounding of this large of the flood waters of the Rio Grande would not only effectually remedy the ing troubles regarding the equitable division of the waters of said river bet the two countries, but would make it feasible to control the flow in the riv that it will be practically constant and uniform and prevent the erosions avulsions which have heretofore rendered the boundary line between the countries so uncertain, unstable, and vexatious. It is certain that this effect result as far down the river as the mouth of the next important tributary Concho River, of Mexico, and that the restraint of the torrential flow will great degree, remedy the erosions and avulsions below the mouth of the Co to the Gulf.

Of the 27,000 acres to be submerged by the waters of the reservoir, about are in the Territory of New Mexico and consist of two unconfirmed grants, k as the Francisco Garcia and Refugio Colony grants. It is probable that th to most of this land still rests in the Government of the United States, about acres at the upper end of the Refugio Colony grant being occupied by set and that there will be no difficulty in proceeding at once to submerg remainder.

The remaining 17,000 acres are in the State of Texas, and it is probable t many cases there will be efforts to procure, by injunction and otherwise, and exorbitant sums of money for these lands, unless there can be devised a p of condemnation that will insure justice to the United States. Probably the of Texas would be willing to cede jurisdiction of these lands to the United and thus enable the same courts to have jurisdiction over the entire body o to be submerged.

This may be important from the fact that the changing of the channel Rio Grande in these lands has brought about questions of boundary be Texas and New Mexico, which may embarrass the adjustment of titles different courts have jurisdiction.

The commissioners made earnest efforts to procure from some of the larg ers of the lands to be submerged, an offer of their lands at a reasonable val hoping thereby to encourage a willingness on the part of all to permit the sition of title at a reasonable valuation. The only result so far has be inclosed letter from Messrs. Magoffin, Zimpleman, and Crosby, and a s letter from Mr. Magoffin offering some 7,000 acres, consisting of the best be submerged, in which the price asked, $8 per acre, the commissioners c to be about twice the market value. The commissioners would recomme no further efforts be made to procure the lands to be submerged by purch that the usual course of condemnation be resorted to in case the lands are re

There are no considerable vested water rights on the river below the I Valley and above the Concho, where the flow below is always consta abundant.

The estimate of the cost of this entire project is as follows:

For the construction of the dam proper, waste ways, outlets, etc. (see the estimates of the joint engineers, appended hereto)	$1,117
For the removal of the tracks of the Atchison, Topeka and Santa Fe Railway Company (see copy letter of President E. P. Ripley, inclosed, marked X)	522
For the removal of the tracks of the Southern Pacific Railway Company (see copy letter of General Manager J. Kruttschnitt, inclosed, marked Y)	447
For the condemnation of the lands to be submerged, and improvements thereon	190
For salaries, office expenses, etc	40
Total	2,317

Notwithstanding the magnitude of this sum, taking into considerat impossibility of ever arriving with any degree of accuracy to the damage been done Mexico by the depletion of the waters by the United States, a any settlement by a pecuniary compensation would give little satisfaction, reason that by the time the sums due the parties were arrived at it wil

bility, have been so dissipated by the intervention of lawyers, claim agents, thers that the true sufferers would be little compensated, and the further hat it is believed that there is a moral obligation resting on the two Govern- —and it is reasonably practicable—to rescue the perishing communities rom the heretofore unwitting spoliation of others above, who now in turn perish themselves if compelled to desist from using the water which they unlawfully appropriated. The commissioners therefore make the following mendations:

RECOMMENDATIONS.

e joint commission therefore recommend to the two Governments they rep- t, that a treaty be entered into, as a final settlement of all questions past and e, regarding the distribution of the waters of the Rio Grande.

That the United States cede to Mexico the small tract of land before referred it reserving corporate rights of the Southern Pacific Railway Company to nited States.

Construct the dam as designed by the joint engineers.

Remove the railroads from the bed of the proposed reservoir.

Acquire the land to be submerged.

And in some way prevent the construction of any large reservoirs in the Rio de in the Territory of New Mexico, or in lieu thereof, if that be impractica- estrain any such reservoirs hereafter constructed from the use of any waters ich the citizens of the El Paso Valley, either in Mexico or in the United , have right by prior appropriation, and provide some legal and practica- medy and redress, in case such waters should be used, to the citizens of ountries. And that thereafter the two Governments provide by joint rep- atives or mixed commission who are to reside at their respective ends of the for a permanent distribution of the flow, as follows:

half or so much of one-half as may be required to the Mexican side of the or such use as the Mexican Government may see proper to apply it.

half or so much of one-half as may be required to the United States side for r use by the United States.

all the remaining flow not required by either nation to the bed of the river, ilated by partially depleting and refilling the reservoir as to maintain as far ticable, a constant and uniform flow, for the purpose of avoiding a change ed (the boundary) by erosion or avulsion.

in consideration of all the foregoing, that Mexico relinquish all claims for ity for the unlawful use of waters in the past, and accept the dam so con- d as an equitable distribution, past and future, of the waters of said river, so the United States conform to what is stipulated above.

the United States defray all the expenses of the works of the dam, waste outlets, etc.; the removal of the two railroads from the bed of the reservoir; ndemnation of the land; and have charge of the construction of the dam; at Mexico be put to no pecuniary expense in the matter save the salaries aintenance of such representatives as may be desired to witness the con- on of the work and see that it be carried out according to the stipulations treaty and the specifications of the work.

ew of the importance in getting this subject before the present Administra- Washington in time to receive attention from both the executive and leg- departments, and thus avoid the long delay that would necessarily occur the matter be laid over to a new Administration, having given the matter rious study, it was decided that the United States commissioner would pro- once, upon the signing of this journal, to Washington, to hand in person Secretary of State his copy of the proceedings, and that the Mexican com- ner would proceed at once to Mexico, to carry his copy to his Government, request that the Mexican Government approve or disapprove these proceed- as early a date as practicable, and telegraph the result to the Mexican min- Washington, in order that there may be as little delay as practicable in Governments bringing this matter to a final determination.

e United States permits the construction of the Elephant Butte Dam (or imilar structures) on the river in New Mexico, the commissioners concur opinion of the engineers that the work should be done under United States national supervision, as the release of such a vast body of water would not danger life and property below it, but possibly destroy the international 0 miles below, should it be built, and entail further destruction.

population of the El Paso Valley is at least 50,000, all dependent upon the the water in the Rio Grande. The engineers, in their report, place the ion at 20,000.

At 2 p. m. the joint commission, having concluded the consideration of the subject of the distribution of the waters of the Rio Grande, and the proposed international dam at or near El Paso, thereupon adjourned.

ANSON MILLS,
United States Commissioner.
JOHN A. HAPPER,
United States Secretary.
F. JAVIER OSORNO,
Mexican Commissioner.
S. F. MAILLEFERT,
Mexican Secretary.

EL PASO, TEX., *November 18, 1896.*

Col. ANSON MILLS, U. S. A.

DEAR SIR: I hereby agree to make a good and perfect title to 240 acres of land out of survey 261, adjoining the Cañutillo grant, for the price of $8 per acre.

Very respectfully,

JOSEPH MAGOFFIN.

EL PASO, TEX., *November 18, 1896.*

Col. ANSON MILLS, U. S. A., *City.*

DEAR SIR: We, the undersigned, hereby agree to make a good and perfect title to what is known as the Cañutillo grant for the price of $8 per acre.

This grant embodies, say, 1½ leagues, or 6,682 acres.

Very respectfully,

GEO. B. ZIMPELMAN.
JOSEPH MAGOFFIN.
J. F. CROSBY.

X.

CHICAGO, ILL., *November 16, 1896.*

Col. ANSON MILLS,
Commissioner International Boundary,
No. 2 Dupont Circle, Washington, D. C.

DEAR SIR: Referring to the correspondence between us in regard to removal of our present roadbed from Anthony to El Paso by reason of the proposed construction of an international dam across the Rio Grande River near El Paso, TEX., I beg to advise you that we are prepared to make this proposed change of line for the sum of $522,728.36. This is an increase of $98,899.36 over Mr. Follett's figures, and I submit below the details of such increase:

Right of way, $3,680. Mr. Follett makes no allowance for right of way, but there will be some expense in connection with the removal and changes, and while we have eliminated all State land, assuming that right of way would be granted through it (and our bid is based on such assumption), I do not think the estimate as above is unreasonable.

Grading, $20,071.50. This increase is due to reclassification by our engineer, who has gone very carefully over it, and he thinks that it is not excessive.

Bridging, $932.50. There is no material increase in this item.

Cast-iron pipe, $10,767.05. Mr. Follett's prices are not sufficient to cover freight charges at our "company material" rate per ton-mile of three-fourths of a cent, and the increase of estimate is also partly due to our opinion that more pipe should be provided than he has estimated.

Cross ties, $12,681.20. This increase is also due to our freight charges, as above.

Telegraph, $846.90. This is not a material increase.

Taking up old track, $4,550. This item Mr. Follett omitted entirely.

Track laying and surfacing, $6,370. Mr. Follett's estimate is $400 per mile, but he evidently did not include engine and train service and the expense in material yard, all of which will increase the actual cost to at least $750 per mile.

Sidings, $2,705.70. Mr. Follett has only estimated for 1 mile, at a cost of $2,000. The above increase is for such additional spurs as are on the existing track.

Salvage, $5,000. Mr. Follett estimates old rails taken out of present line to be worth $25 per ton. This is higher than our customary charge for old rail taken up.

Compensation for increased maintenance. $47,800. This increase is caused by e additional mileage and height of trestlework which will be required on the w line. On the present line there are only 1,035 lineal feet of low trestle, while the proposed line there are 2,840 feet, much of which is from 30 to 45 feet in ight.

Engineering and incidentals, $7,629.04. This increase is for incidentals to cover gineering and other expenses not included in the above.

The above items foot up a total of $122,713.91. Mr. Follett, however, in figuring e cost of steel rails and fastenings, has computed them at much higher prices than w prevail, and we figure a decrease of these items under Mr. Follett's figures of 5,814.55, which, deducted from the grand total above named, gives a net increase er Mr. Follett's figures as first shown, viz, $98,899.36.

While we are prepared to remove our line as above stated for $522,738.36, it is so proper for me to state that should a more careful location and better knowlge of the situation than it has been possible to acquire in the limited time at our sposal develop the fact that we can reduce the cost, we shall be pleased to give e Government the benefit of any reduction so obtained. We desire only to reimrse ourselves for the actual cost of the work, appreciating the many advantages hich would accrue to us by reason of the construction of the dam.

Trusting that the above will be satisfactory, I beg to remain,

Yours, very truly,

E. P. RIPLEY, *President.*

Y.

SOUTHERN PACIFIC COMPANY,
New Orleans, November 17, 1896.

Col. ANSON MILLS,
Third Cavalry, United States Army,
Commissioner, International (Water) Boundary Commission,
No. 2 Dupont Circle, Washington, D. C.

DEAR SIR: Referring to previous correspondence had with you on the subject of furnishing an estimate of the cost of removing the track of the Galveston, Harrisburg and San Antonio and of the Southern Pacific Railroad of New Mexico from the area proposed to be submerged by the construction of an international dam near El Paso, Tex., I beg to inform you that as close an estimate as could be made in the limited time available has been prepared by our chief engineer. We wish it distinctly understood, however, that the estimate is not a very close one, and we would not wish to be bound by it in the event of the construction of the dam. The total cost is also based on a temporary use of the Santa Fe track during the reconstruction of our permanent bridge; the cost of doing this necessarily can not be included in the estimate, as we have not approached the Santa Fe as to the rental they would expect, and could make no estimate of what they would ask us. No estimate has been made of the cost of right of way, as it was assumed the Government would furnish this free to the company, and of a width at least equal to the present right of way, and in all cases sufficient to get the necessary material to build the new line. Under these assumptions the entire cost foots up $447,385.68.

Trusting that this will reach you in time, I remain,

Yours, very truly,

J. KRUTTSCHNITT, *General Manager.*

ENGINEERS' JOINT REPORT TO THE INTERNATIONAL COMMISSION.

EL PASO, TEX., *November 24, 1896.*

To the International (Water) Boundary Commission.

GENTLEMEN: We have the honor to submit the following report in relation to the matters referred to us for investigation by action of the commission taken at its meeting of August 17, 1896.

The scope of this investigation is outlined in the following extract from the proceedings of the commission:

"The engineers to take up and as far as practicable complete the following:

"(1) Locate the site for the proposed dam.

"(2) Develop thoroughly the bed rock.

"(3) Make one or more working plans, with estimates of cost in detail for the dam itself and all appurtenances, such as by-wash and outlets.

"(4) Survey and make an accurate map of whatever land may be necessary to cede to Mexico in order that Mexico may possess one end of the dam on her own territory.

"(5) Make thoroughly all investigations practicable as to flow of the waters at different points on the Rio Grande and its tributaries, as contemplated in the agreement between the two Governments.

"(6) Enumerate and measure all the ditches and reservoirs that are now taken from the Rio Grande and its tributaries and measurement of flow, as far as practicable, and determine theoretically as far as possible the question whether or not, after these ditches and reservoirs are supplied, the present flow of the river will maintain the proposed reservoir year by year."

The progress of the work has been greatly embarrassed by lack of funds on the American side, the United States Congress having made no appropriation for the current fiscal year to provide for the expense of this investigation. The available funds have, therefore, only been sufficient on the American side to permit the employment of one assistant engineer, whose time has been fully occupied in collecting statistics as to the water in the river and ditches above El Paso. The important work of surveying the possible sites for the dam and making borings to develop the bed rock has therefore devolved upon the Mexican engineers. We have, however, had frequent conferences, and the data collected by each side have at all times been accessible to both.

We will now discuss the questions referred to us in the order in which they are given above.

1. LOCATION OF THE SITE OF THE DAM.

We understand the dam referred to above to be the dam described in the report made by Col. Anson Mills to the Geological Survey in 1889, or any other structure which will have the effect of flooding the valley above El Paso to the level indicated in that report, namely, 3,775.5 feet above mean Gulf level, as determined from the bench marks of the Southern Pacific Railroad Company. This fixes the height of the dam; and we have given no consideration to the question of the advisability of building a higher or a lower structure, which would affect both the storage capacity of the reservoir and the area of land to be overflowed, two essential elements of the problem which we assume to have been heretofore determined to the satisfaction of the commission.

A dam of this height can only be built with safety upon a solid foundation; and as the valley below has already a population of upward of 20,000 people, it is manifest that no experimental or uncertain type of construction can be adopted. As the bed of the river from El Paso to the upper end of the gorge above consists of loose, clean sand and gravel to great depths, there remains no choice as to the type of construction, masonry being the only type available. Now, since a masonry dam of this height requires a rock foundation, the selection of the site is at once limited to those points in the gorge above El Paso where the bed rock lies at depths which are not prohibitory.

So far we have found but one such cross section in the gorge, the depth to the ed rock at this point not exceeding 87 feet. Provisionally, therefore, for the pur- ose of making an estimate, we have located the dam on this section as shown on eet 1 of the accompanying topographical map of the gorge, Exhibit A.

We are, however, of the opinion that before construction is actually begun lditional borings should be made with a view to improving the location if ssible.

2. DEVELOPING THOROUGHLY THE BED ROCK.

The making of borings to depths greater than 50 feet is very slow and expensive ork.

The time and funds available in this case have not been sufficient to demon- rate thoroughly the location of the bed rock throughout the gorge at El Paso, t it has been fairly well determined that there is no location in the gorge where e depth to bed rock does not exceed 50 feet, and there is at least one section where e maximum depth is 87 feet; the first statement being based mainly upon the ndings taken in 1889.

The borings recently made are shown in plan and section on the drawings here- th, Exhibits A and B.

They consist of holes sunk with ordinary artesian-well appliances and lined with nch pipe. Samples of the materials brought up from the bottom of the holes re taken from time to time. When rock was struck, it was tested by drilling a le into it to a depth of 2 feet with an ordinary drop drill. In all cases the rock und at the bottom of the hole was compact limestone similar to that which ms the sides of the gorge.

While the evidence above is fairly conclusive, it does not furnish data sufficient which to base working drawings and commence construction; many more bor- gs are necessary to develop in detail the proposed site, and they should be sunk eper into the rock.

3. WORKING PLANS AND ESTIMATES.

On account of the lack of time and data, working drawings can not be submitted this date. We believe, however, that we have information sufficient on which base a provisional estimate of cost.

In preparing this estimate we have duly considered the following special ficulties:

Much of the foundation must be sunk to a depth of nearly 100 feet through arse sand and gravel, saturated with water. This will be a work of considerable ficulty, necessitating special methods.

During much of the time a moderate flow in the river will have to be dealt with, d during many months the work is likely to be interrupted by floods.

Special precautions will have to be taken to avoid risk of the dam being carried ay by a flood while in process of construction before it has reached such a ight as to make the spillways operative.

The records of the Geological Survey indicate that the flood of 1891 carried past Paso about 1,433,000 acre-feet of water in four months, or enough to fill the oposed reservoir nearly three times.

On the other hand, the area of the reservoir is such that we feel no concern as the maximum daily discharge, of which there is a record of 16,000 second-feet, ut have based our estimates for the necessary spillways upon the maximum onthly discharge, which is a little less than 12,000 second-feet.

Assuming the highest permissible level of the water to be 3,775.5 feet above ulf level, as before stated, we have placed the crest of the dam at 3,781.5 feet and e crest of the spillways at 3,771 feet.

We have located the pipes for drawing off the water in tunnels which will also rve to carry the low-water flow of the river during construction.

ESTIMATE.

ubble masonry above ground, 35,638 cubic yards, at $7	$249,466
ubble masonry in foundation, 58,093 cubic yards, at $10	580,930
wo spillways	55,000
wo service tunnels	27,000
48-inch service pipes	43,000
lves and appurtenances	16,000
ministration and contingencies, about 15 per cent	145,604
Total	1,117,000

Existing data as to the flow of the Rio Grande are very meager, and are n embodied in the reports of the United States Geological Survey. They ar fully discussed in the accompanying report of Mr. W. W. Follett. ass engineer.

The river is often dry for months and at other times is subject to destru floods.

6a. ENUMERATION AND MEASUREMENT OF DITCHES AND RESERVOIRS A EL PASO.

The systematic collection of all the existing data as to the ditches and rese in the Rio Grande basin above El Paso was a difficult piece of work to be a plished in the few months allowed for this investigation. Mr. W. W. Fo assistant engineer, was detailed for this duty, and his report herewith is th evidence of the skill and untiring energy which he has devoted to the task. report gives in detail the enumeration of the ditches and reservoirs, as calle but no attempt was made to measure these structures, as time and money w not permit. Briefly, it may be stated, that there are 925 irrigation ditches ing water from the Rio Grande and its tributaries in Colorado and 603 in Mexico; the number of storage reservoirs is 4, having an aggregate capaci 31,300 acre-feet.

6b. WILL THE PRESENT FLOW OF THE RIVER MAINTAIN THE PROPOS RESERVOIR YEAR BY YEAR.

The cubic contents of the proposed reservoir is estimated at 535,000 acre A study of the existing data as to the flow of the Rio Grande, collected b Geological Survey, and quoted and discussed in the appendix to this report, w indicate that the least annual flow of the river is somewhat in excess o amount. We are therefore of the opinion that the present flow of the river i ficient to supply the reservoir. It is, however, apparent that no dependenc be placed upon the river continuing to maintain the supply year by year, t some steps are taken to regulate for the future the construction of reservo its valley and the diversion of its waters. The necessity for Federal cont other efficient means of supervision and regulation, is made still more app when it is considered that the rupture of an improperly constructed dam might readily entail the destruction even of one which has been carefully below; and these structures are on such a vast scale that it would be diffic estimate the magnitude of the disaster.

In submitting this report we wish to acknowledge the cordial and efficient ance of Mr. W. W. Follett, civil engineer, and of Don Alberto Flores an Manuel Calderon, ingenieros de caminos, puertos y canales; Don Manuel C

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A STUDY OF THE USE OF WATER FOR IRRIGATION ON THE RIO GRANDE DEL NORTE.

By W. W. FOLLETT, *Civil Engineer.*

LETTER OF TRANSMITTAL.

EL PASO, TEX., *November 17, 1896.*

Capt. GEORGE McC. DERBY,
Corps of Engineers, U. S. A.

DEAR CAPTAIN: With this I hand you my report on a study of the use of water for irrigation in the drainage of the Rio Grande del Norte above El Paso, Tex.

This study was made for the purpose of investigating the claim of the Mexican Government that the people of the United States have taken from the inhabitants of Mexico water which was theirs by ancient right of prior appropriation. It also extends to a consideration of the probability of there being a water supply sufficient to successfully serve a reservoir at El Paso, the construction of which by the United States is suggested as a recompense to the Mexicans for their alleged loss of water.

Yours, truly,

W. W. FOLLETT,
Civil Engineer.

EL PASO, TEX., *November 17, 1896.*

Capt. GEO. McC. DERBY,
Corps of Engineers, U. S. A.

DEAR CAPTAIN: On August 22, 1896, you handed me in El Paso, Tex., the following letter of instructions:

EL PASO, TEX., *August 22, 1896.*

Mr. W. W. FOLLETT, C. E.,
El Paso, Tex.

DEAR SIR: The commission have decided to adopt the plan of operations outlined by Colonel Mills in his memorandum to Mr. Osorno. The questions referred to me for report are, therefore, those mentioned in the second paragraph of that memorandum.

I would like you to begin at once collecting and arranging such data as can be obtained bearing upon these questions, and report them to me in such form as to make them readily available as the basis of an opinion.

As the first step in this direction, I would like you to proceed at once to Denver, and to such points as you may think necessary in the valley of the Rio Grande in Colorado and New Mexico, and interview the State engineer of Colorado and such other officials and individuals as may be able to give you information which will

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all the ditches.

In submitting your report upon this investigation I would be glad to hav accompany it with any suggestions you may be able to offer bearing upo subject under consideration.

Until further orders will you kindly submit a weekly report detailing the ress made during the week?

On your trip through Colorado and New Mexico you will be accompani one of Mr. de Ibarrola's young assistants, to whom you will please give the access to all of the data collected and ample opportunity to keep himself inf as to the impartiality and accuracy alike of the results and the methods emp It has been understood with Mr. de Ibarrola that in complying with these in tions you are not to delay the progress of the work, as it is intended th cooperation of his assistant shall be an assistance to you and no obstruction

Very respectfully,

GEO. McC. DERBY,
Captain of Engineers, U. S

In addition to the above, you verbally instructed me to com this field work by October 15. No copy of the memorandum ref to in the first paragraph of the above letter was furnished me, alth I have seen the paper.

The work you outlined in this letter was for the purpose of ga ing data to enable you to answer two questions raised by Mr. Ri Olney, Secretary of State, and Señor M. Romero, Mexican mi at Washington, in a convention signed by them on May 6, These two questions are suggested in the following paragraphs above convention:

First. The amount of water of the Rio Grande taken by the irrigation constructed in the United States of America.

Second. The average amount of water in said river year by year befo construction of said irrigation canals and since said construction, the prese included.

On August 25 I left El Paso accompanied by Mr. Alberto F chief of Mr. de Ibarrola's staff.

We stopped one day at Santa Fe, N. Mex., where I found that

ach man's control, but make no effort at measurements of canals. Then go to Chama, N. Mex., hire a team and driver, go down the Chama to la and through that valley and up to Taos. I will measure en route the litches and gather the best data I can as to the smaller ones. When we ished that trip I will send that team back to Chama, and we will come Santa Fe) by train and get another team, go down Santa Fe Creek to the nde, and then follow the valley of that river, gathering by inquiry what can as to its tributaries and measuring the ditches taken out of the main

reached Denver on the 27th and found that the State engineer's ad on file but little data relating to the use of water in the San alley beyond copies of the decrees in each district, partial copies h we already had. These copies I completed and, after getting nformation I could in Denver from gentlemen familiar with the y to be examined, we left there on September 3, en route for the is Valley. Before leaving Denver I received the following m from you:

ead as proposed in your report of August 26; in the meanwhile I will see onal funds can be obtained.

vent first to Del Norte in order to consult with Mr. Francis T. on, the superintendent of irrigation in water division No. 3 of lo, which comprises the whole of the San Luis Valley. We im an energetic and intelligent man, and he has been of much ice to me in this investigation. He informed us that he had ted the commissioner in each of the seven water districts under trol to furnish him complete statistical reports of the use of nd acreage irrigated during the year. I requested him to have ve him, in addition to the information already asked for, the capacity of each ditch in its present condition, regardless of nal size or of its decree, and to furnish me with a copy of all us obtained. This he agreed to do.

careful consideration of the time it was absolutely necessary te to the New Mexico drainage in order to enable me to make g approximating a complete statement of the use of water I decided that it would be best to trust to Mr. Anderson to the Colorado data, and to go on to Chama as quickly as pos- This we did, after spending one day in district No. 35, a small ere the canals have never been adjudicated and which has missioner, and a day at Antonito, where we obtained much e information from Bishop John C. Dalton, of Mauassa, the ommissioner for district No. 21. Later developments have hat it would have been better for us to have spent a few days the valley, as the commissioners were very slow in getting formation into Mr. Anderson's hands, and their reports as to g capacity are not correct, being in several districts merely of the sizes given in the decrees. These, as I will show you detail later, may have no relation whatever to the actual ies. This was not Mr. Anderson's fault, but probably a mis- tanding on the part of the water commissioners.

reached Chama on September 7. There we were delayed two etting our outfit together for the wagon trip. On the 9th Mr. was called by wire to Mexico, and he left by rail that day. I ed his enforced departure very much, as I had found that he clear insight into the purpose of our work and he had been of id to me during the few days we had been together.

he day of Mr. Flores's departure I started down the Chama on

those above the Jemez Mountains.

In detail the topography and water supply of the country is as follows:

The great valley on the head of the river, formerly known a Luis Park, is properly divided into two sections. All of it w included (see Exhibit A) in water districts Nos. 25, 26, a together with that portion of district 20 which lies north of Al aggregating in area about 2,600 square miles, never furnish water, so far as surface flow is concerned, to the Rio Grande its subsurface flow, if there be any, is very small. Not only true now, when large sections of the area in question have be gated, but it has been so since 1874 at least, and was prob prior to that date.

The remainder of the Colorado area all furnishes water to th river.

The San Luis Valley is a wide stretch of smooth land with a 3 to 5 feet per mile along the main stream and a fall from the the channel of the river of from 5 feet per mile up to 15 or The soil is generally underlaid with gravel, and when suppli sufficient water produces a good crop of wheat, oats, or barle season is too short for the production of corn. The Rio Gran some 60 miles through the mountains before entering this wi at Del Norte. There its course continues nearly due east to A where it swings to the south. Its channel, while well defined, low, being at Alamosa only 6 to 8 feet below the general leve ground. It is in coarse gravel, not easily eroded, and headw ditches are easily maintained.

Near the lower end of the San Luis Valley the river receiv taries, the most important being the La Jara, Alamosa, Cone San Antonio from the west, and the Trinchera, Culebra, and from the east. All of these bring into the main river large a of water each spring, except when the snowfall of the previou

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l of its waters being used for irrigation. There is no arable
ng the main river in this cañon, but all of the streams com-
. the east water good bodies of land. The fall of the river is
feet to the mile from the Colorado line to Embudo.
liately below Embudo the river enters the Espanola Valley,
some 25 miles long and from 1 to 3 miles wide. In this val-
eives the water of Santa Cruz River from the east and that
a from the west. The latter is an important stream, drain-
ge area of mountain country and furnishing much water to
Grande. The Espanola Valley is very fertile and produces
pples, and peaches in abundance, besides corn and wheat.
lower end of the Espanola Valley the river cuts through the
ge, before mentioned as connecting the Santa Fe and Jemez
ns, forming White Rock Cañon, a narrow, tortuous gorge,
to 20 miles long and, in places, 500 feet deep. Here the fall
ver is some 10 feet to the mile, its fall in the Espanola Valley
mewhat less than this amount.
due west of Santa Fe the river leaves the White Rock
nd enters a long and narrow valley, bounded on either side by
hich rise abruptly to a height of 300 to 500 feet above the
d then slope gently upward to the foot of the mountains.
ll of these mesas have a good soil, but no water supply for
, and hence are valueless except for pasturage.
alley extends as far south as San Marcial, some 150 miles
cañon, there being two or three short cañons in this dis-
t varies in width from 1 to 3 or 4 miles, and outside of that por-
pied by the wide, sandy, and ever-shifting bed of the river,
le agricultural land. But one tributary enters the river in
nce which brings in any large amount of snow water, and
es for a short time in the spring only. This is the Jemez,
s its source in the high mountains west of the White Rock
here the snowfall is quite heavy. Santa Fe and Galisteo
so sometimes deliver from the east some water in the spring,
are usually dry.
iles below Albuquerque the Rio Puerco enters from the west.
r drains a large area of country, but on all of it the snowfall
ight, and the rainfall comes principally in sudden heavy
rs, so that the Puerco is a torrential stream when in flood,
nine-tenths of the time. While its drainage area, as before
about 6,400 square miles, it is not likely that over two-thirds
ea ever delivers water to the Rio Grande.
an Marcial to a point some 20 miles above Rincon, about 100
river, the hills abut closely onto the channel of the stream,
g but little valley land. From the west enters several small
s, which have cut down deep into the Mesa Cuchilla Negra;
these has along it a narrow fertile valley, and, while each
the Rio Grande some snow water in the spring from the
nge lying to the west, dependence for a summer water sup-
on springs which appear in the bed of the stream about half-
veen the mountains and the Rio Grande.
e of hills jut out from the Cerro Montoso northeast of Socorro
to the river. South of these begins a wide and level mesa,
tends south to Las Cruces. It is named the Jornado del
and is about 125 miles long and from 15 to 30 miles wide.
O square miles of its surface are covered with a lava flow,

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III. HISTORICAL.

Before the middle of the sixteenth century the Spaniards New Mexico and the valley of the Rio Grande and there fo Pueblo Indians, living in their many-storied towns and cultiva land of the valleys, bringing water onto it by acequias, or ir ditches, many of which are still in use to this day. How lon Indians had been on the ground is unknown, but they were ev old inhabitants, and raised not only grain and fruit, but even as one poetical and doubtless homesick Spaniard wrote th bloomed along the acequias bank "as bloomed the roses of b Aragon." There are some seventeen or eighteen of these sett of Pueblo Indians in New Mexico, each holding a land grant 2 square and each with its old pueblo, containing from 200 to 600 There were at least this number of pueblos when the Spanian to the country, and probably several more, as the ruins of thre still exist. The inhabitants of each pueblo were then mu numerous also than now. In other words, prior to the middl sixteenth century, three hundred and fifty years ago, there we 15,000 to 20,000 people living from products raised by irrig the Rio Grande drainage above the Jornado del Muerto, and of irrigated land probably exceeded 30,000 acres.

While the Spaniards first entered New Mexico from Sonora Gulf of California, the first attempts at colonization were ma El Paso as a base, the Spanish conquest of Mexico having e to the Rio Grande. This first attempt was made in 1598, first Spanish capital of New Mexico was then established at C in the Espanola Valley, just above the mouth of the Cham was abandoned in 1605, and the inhabitants and capital tra to Santa Fe, where they and their descendants remained un engaged principally in mining. Then the Pueblo Indians

'e years after 1852 the settlements in the San Luis Valley were l to the country on the Costilla and Culebra and to the Conejos the town of Conejos being founded in 1855. In 1866 and 1867 ents were started on the Rio Grande, San Luis, and Saguache, ie next three years saw farms opened and small ditches taken he Carnero, the La Gavita, Alamoso, and La Jara, but all of xcept those at Conejos, were confined to the little valleys back ills around the margin of the San Luis Valley proper. On these the principal product was hay. This the Mexicans fed in to their stock, to which the main valley furnished abundant age for the greater portion of the year.

it 1873 or 1874 the Americans began to move into the San Luis, ll the farm lands were confined to the small side valleys. The ettlement in the San Luis Valley proper, outside of Conejos, was by the Mormons, who founded Manassa in 1878 or 1879. Soon this time the Denver and Rio Grande Railroad built into the y. The main industry was still cattle raising, however, until t 1882. Then commenced the era of large canal building, which inued for ten years. During this time were built the Rio Grande, te Vista, Empire, San Luis Valley, Costilla, Prairie, and Farmers' n canals, besides many others. All those named head on the Rio ide between Del Norte and Alamosa, and, stretching 30 or 40 miles h and south from the river, cover the whole of the western half of 'alley with their network of laterals. Colonists were brought in pidly as they could be found, and a great and brilliant future was icted for the San Luis. But it was found that the water of the rande was not sufficient to supply these monster canals, that the 'as not in all cases as fertile as expected, and that the climate was trying. For these reasons immigration was checked, and since the valley, instead of rapidly extending its irrigated areas, has eld its own.

ile quite a large native American population has come into the Grande drainage in New Mexico since the construction of the ads in 1880, it is confined principally to the towns, and to-day 90 per cent of the irrigating in this section is done by Mexicans ndians. These people pursue their ancient methods of irriga- naffected by modern progress.

IV. IRRIGATION LAW AND SUPERVISION IN COLORADO.

der an enabling act passed by Congress March 3, 1875, the peo- f Colorado adopted a constitution July 1, 1876, and the Territory ne a State by Presidential proclamation on August 1, 1876.

e constitution of the State recites in Article XVI:

5. The water of every natural stream not heretofore appropriated within ate of Colorado is hereby declared to be the property of the public, and the is dedicated to the people of the State subject to appropriation as hereinafter ied.

6. The right to divert unappropriated waters of any natural stream to ben- l use shall never be denied. Priority of appropriation shall give the better as between those using the water for the same purpose, but when the waters y natural stream are not sufficient for the service of all those desiring the the same, those using the water for domestic purposes shall have the pref- over those claiming for any other purpose, and those using the water for ultural purposes shall have preference over those using the same for manu- ing purposes.

Section 5 established what was then an innovation in the ownership of water, denying the old doctrine of riparian rights, which vests the title to the water of a nonnavigable stream in the owners of abutting property. California was the only State in the Union in 1876 where irrigation was in vogue, and the supreme court of that State decided recently that riparian rights must there be respected. I think, however, that the constitutions of several of the States admitted since 1876 have followed the Colorado precedent in the framing of that clause of their constitutions relating to the ownership of water.

In 1879 the Colorado legislature passed voluminous irrigation laws, These provide for the division of the State into water districts. bounded by natural watersheds, and for the adjudication of water rights in each district by the district court within whose jurisdiction the territory may lie. These districts were afterwards grouped into water divisions and the governor authorized to appoint a superintendent for each division and a commissioner for each district from men recommended by the county commissioners of the county or counties in which the water division or district lies. The duty of these officials is to distribute water among the different ditches in the proportions and priorities prescribed by the court decree. The water commissioners report to the superintendent and the superintendent to the State engineer. The system is very faulty in its working, because the State engineer has no disciplinary power over his staff, except to recommend to the governor the removal of an offending subordinate, and likewise the superintendent of a division can not compel obedience from the commissioners under him. Moreover, the water commissioners receive their pay from the county, their bills for service being first passed on by the county commissioners, and the latter may reduce or reject altogether these claims, so that a water commissioner, when carrying out peremptory orders from the State engineer or the superintendent of his division, has no assurance that he will be paid for his labor. The working of the system is very cumbersome and unsatisfactory.

The San Luis Valley constitutes division 3, and is subdivided into eight districts, numbered respectively 20, 21, 22, 24, 25, 26, 27, and 35. The boundaries of these districts are shown in red on Exhibit A.[1]

As the adjudication of water rights in a district is a very tedious process, the taking of testimony is generally placed in the hands of a referee, who is, unfortunately, obliged to be guided in his decisions entirely by the ex parte testimony of the claimants for water. They, of course, place their date of appropriation as early as possible, the carrying capacity of their ditch as large as they dare, and the area irrigated or irrigable just as large as they can figure it, and, unless some neighbor calls them down, the referee has no check on the accuracy of their statements. This results in ditches frequently getting appropriations—or decrees, as they are commonly called—largely in excess of their carrying capacity. For instance, 107 ditches in district 22 have an actual aggregate carrying capacity, as stated by the water commissioner, of 1,034 second-feet, while their decrees amount to 2,978.42 second-feet and their claimed capacity to over 4,000 second-feet. One hundred and seventy-one ditches in district 25 claim to have a carrying capacity of 2,501 second-feet, while the decrees amount to but 919.18 second-feet. The decrees of the San

[1] Public document.

Luis Valley were made on various bases, averaging about 1 second-foot of water of decree for each 50 acres irrigated.

All the districts except district 35, in division 3, have been organized and adjudicated and decrees issued on the following dates:

District 20	Nov. 17, 1891
District 21	July 11, 1888
District 22	1890
District 24	June 14, 1889
District 25	Mar. 28, 1890
District 26	Nov. 23, 1889
District 27	Feb. 23, 1890

In district 20 a new decree was issued in the spring of 1896 and the district was operated thereunder this year. The validity of the new decree has been assailed, with a good prospect of success, and as the district has worked under the old one for four years and is likely to return thereto next year or the year after, I have based my study of the district on the old decree.

The State legislature of 1889 passed a bill, which became a law, instructing the State engineer to gather each year and embody in his biennial report statistics as to the amount of water used and land irrigated by each ditch in the State. It became the duty of the water commissioners to collect this information under instructions from the State engineer and superintendents of the several divisions. The work had to be paid for, however, by the counties, and prior to 1896 the county commissioners in several counties have refused to allow the bills of the water commissioners for this work. This has resulted in either no statistics being gathered in those counties, or in what were obtained being collected in a perfunctory way from the returns made by the owners or managers of the different ditches, without any attempt at eliminating errors and obtaining accurate results. This has been especially true in the third division, no agricultural returns whatever having been made from there until 1895, when partial reports were returned from districts 20, 21, 24, 25, 26, and 27. This year Mr. Anderson, the superintendent, made an heroic attempt to obtain accurate returns. He has succeeded fairly well, although there are still many apparent discrepancies in them.

My report on the use of water in Colorado is based on the returns for 1895 and 1896, supplemented by quite a voluminous correspondence, both by mail and wire, with Mr. Anderson and other parties, and some information I collected in Denver, Alamosa, and Antonito. As before stated, it is to be regretted that more time was not spent in the valley in the personal gathering of data, as a few days of such work would have added very materially to the accuracy and consequent value of this report. This, however, was not done, and hence the statistics given you herewith must be considered with the limitations specifically stated under each district.

V. COMPILATION OF COLORADO DATA.

My method of procedure in collecting the data of each Colorado district has been as follows:

First. From the copy of the decree a list of ditches was made. This list was entered on a blank form containing 16 columns headed and filled in as follows:

1. "No. of ditch," starting from 1 in each district. The ditches of

is impossible to say just when this occurs, and so the above r
adopted as the one most likely to be correct. Where several
priations are made to the same ditch the several years are ent
this column.

5. "Decree." This is the amount of water which a ditch is
authorized to take from the stream. In this column is entered t
of all the appropriations made to a ditch, while the several
priations for each year are entered in the last column on the
Decrees are given in cubic feet per second.

6. "Possible acreage." This column is filled from the ret
the commissioners and the areas given are not reliable; in
would be extremely difficult to say, even after a survey, how
and what land could be irrigated from each ditch, as conflicting c
extensions, etc., will constantly change the conditions. The in
tion is given merely as a guide to show, in a general way, wh
portion of irrigable lands in each district are now cultivated.

7. "Capacity." In districts 20, 21, 22, and 24 the quantities
column are approximations to the actual capacities, but are n
them exact, as no rating flumes are in existence in the San Lu
ley and but few of the ditches have been rated. In districts
and 27 the capacities returned by the water commissioners are
from the decree, which, as before stated, is made up from the
mony of the claimants for water, many of whom do not know w
their ditch falls 10 feet or 100 feet to the mile, and who will g
size at its widest and deepest place, regardless of the rate of
ment of the water through the cross section. As a natural resu
capacities given in these districts aggregate an amount severa
as large as the total of the decree and probably many times a
as the actual carrying capacities. These are in cubic feet per s

8. "No. of days," being the number of days that water
each ditch in 1895, as given in the returns for that year.

16. "Remarks." This column is filled principally with the separate items (where there is more than one) of each decree.

Second. After the list of ditches was compiled from the decrees and made up on this form all the information contained in the returns for 1895 and 1896 was entered in the proper place, together with what other information I might have. As before stated, I found early in the investigation that neither the carrying capacity of the ditches nor their decrees formed a safe basis for an estimate of water used, and so have put into these tables the acreage watered, in addition to the data specified in your letter of instructions.

Third. Wherever no returns were made—and some ditches were omitted in nearly every district—a reasonable assumption was made and the missing data supplied. This was done because totals are what you need and not partial returns.

Fourth. An assumption of total acreage was made in each district for each year from the date of the decree down to 1895. This assumption was based on what information I might have and its proportion to area watered in 1895 and 1896, as stated under the discussion of each one. This acreage was distributed among the different sheets of the district in proportion to the decrees shown thereon and the totals carried to the summation sheets for the district. I did not attempt to show separately the amount of water used by each ditch each year since 1880, as instructed, because it was, in my opinion, impracticable to do so, and, even if it could have been done, would have made the tabulations some four times as bulky as they now are, without adding materially to the information which is now contained on the summary sheets which I have compiled for each district.

Fifth. Starting from the date of the decree and with the acreage assigned to each ditch of a sheet, and the total decree and capacity shown thereon, I worked backward toward 1880, deducting year by year the decrees issued for the succeeding year, and a proportionate part of the capacity and acreage of each ditch having a lapsing decree where a prior decree existed, or the whole capacity and acreage of a ditch where all of the decree was gone. The results thus obtained were entered in the summary table for each district, thus filling up the table, with the exception of the amount of water used.

Sixth. After a careful study of all of the available data, I arrived at the conclusion that the maximum amount of water which can be absorbed and retained or evaporated by an acre of land in one season is 4 feet in depth over its surface, or 4 acre-feet per acre. In apparent contradiction of this conclusion will be found the fact that the returns give an amount of water run through many ditches, and supposedly used on the acreage returned, which equals much more than 4 feet per acre. This occurs as follows: A large percentage of the irrigated lands in division 3 are grass lands, lying along the margin of the streams. On these lands a constant flood of water is poured as long as there is an available supply, the greater part of which runs across the meadow and back into the stream to be again diverted by the ditch next below, where a large portion is again returned to the stream, but the whole amount is charged up in the returns against each ditch. Again, in seasons of short water supply a small amount, say 1 to 5 second-feet, may be kept running through a ditch to supply the inhabitants thereon with water for domestic use, they being forbidden the use of it for irrigation, and the greater part of this water returns again to the stream and is used for irrigation by some ditch lower down with a right prior to the one above. Yet all this water is

charged to the first-mentioned ditch. Hence, in filling columns 10 and 14 of the statements when the number of days water ran multiplied by twice the amount carried in second-feet would equal more than four times the acreage, I have inserted the latter product instead of the former.

This has given me the total amount of water used in 1896, and, where the returns were complete for 1895, the amount used that year also. For the years from 1880 to 1895 I proceeded as follows:

From Mr. Anderson I obtained the following statement:

I give you herewith the consensus of opinion regarding water for irrigation from 1879 to 1896, inclusive. It is fairly accurate.

Year.	Remarks.
1879....	High water in Rio Grande; scarcity in other streams.
1880....	Surplus water in Rio Grande; plenty in other streams.
1881....	Do.
1882....	Do.
1883....	Do.
1884....	High water in Rio Grande; plenty in other streams.
1885....	Surplus water in Rio Grande; plenty in other streams. Very heavy snows covered the valley in winter of 1885–86.
1886....	Surplus water in Rio Grande and other streams.
1887....	Sufficient water in Rio Grande and other streams.
1888....	Do.
1889....	Do.
1890....	Shortage all over valley and other streams.
1891....	Do.
1892....	Do.
1893....	Do.
1894....	Great scarcity all over the valley.
1895....	Very short until after the middle of July excessive rains produced high water in all of the streams until late fall.
1896....	Very great scarcity all over the valley; commenced closing down ditches on Rio Grande. June 7 low-water mark (at Del Norte) 240 second-feet.

This statement agrees fairly well with the other data I have and was made my basis for assuming the amount of water to charge to each acre in the different years, as stated in detail in the discussion of each district.

After thus making up a summary for the different sheets of each district the totals from each are collected onto the three sheets headed "Summary of use of water in San Luis Valley, Colorado."

In looking over these sheets you will notice that with the exception of districts 24 and 25 no new ditches appear after the decrees were granted. The returns for district 21 give the names of four ditches without decrees, but no data as to land irrigated, and so I could not include them in the statement for that district. Judging from their names they are all Mexican ditches and probably small affairs which may have been built and in use long before the decree was issued, but whose owners failed to appear in court. It is likely that their aggregate use of water forms but a small percentage of the whole use in the district. The decree of 1896 for district 20, instead of adding any ditches to the former decree, omits the last six given decrees in 1891. These were either granted decrees conditional on their being built, or after being built were abandoned. This indicates no new construction work in district 20 since 1891. In district 22 I am quite sure that no new ditches have been built since 1890, and from my knowledge of districts 26 and 27 I should say that it is not likely any new ditches have been built in recent years, as those in existence when the decrees were made largely overappropriated the available water.

VI. DISTRICT NO. 20, COLORADO.

Area, about 2,500 square miles.
Adjudicated, November 11, 1891.
Number of ditches, 266, shown on eleven sheets.
Number of separate decrees, 423.
Summation of decrees, 5,561.76 second-feet.
Capacity of ditches, 6,034 second-feet (actual).

District No. 20 is the most important one in the San Luis Valley, as it includes about one-half of the irrigated land in the valley and has within its boundaries several of the largest irrigation canals in the United States. It consists of the immediate drainage of the Rio Grande above the mouth of the Conejos and includes not only the main river, but all the numerous small creeks as well which lie between La Garita Creek drainage on the north and Alamosa Creek drainage on the south. Several of these, at San Francisco Creek, Rock Creek, and Cat Creek, never deliver any water to the main river except in seasons of heavy spring floods. Exhibit B[1] shows the eastern portion of this district and the location of its larger ditches.

On the head waters of the Rio Grande, as well as along the small tributaries, are little valleys which have been occupied as hay ranches for over twenty years. The decrees date back to 1873 and 1874, a few going back as far as 1867.

On passing Del Norte the river enters the main valley, and the elevation of its channel is such that canals leaving the river there run almost due north and south. After passing Alamosa the river, whose course so far has been easterly, swings to the south.

The earliest settlements in the district were made in 1866 by Mexicans, who located below Alamosa, on some low bottom lands along the main river. Up to about 1881 all the ditches built were small ones, although in that year nearly 200 of them were in use in the district. Then came a boom in irrigation development, and several very large canals were constructed in the next six or eight years.

Judging from the dates given in the decree, the first large canal to be started was the Rio Grande (No. 198 of the list), first called the Del Norte. Its first appropriation dates back to 1882, although I do not think that the main part of the canal was built until 1886 or 1887. Leaving the main river just above Del Norte, it skirts the foothills until the valley is reached and then turns north and extends across district 27 to Saguache, in district 26. The returns for 1896 state that it can water 60,000 acres. Its capacity of 1,500 second-feet is sufficient to serve twice that area.

The Monte Vista Canal, No. 204 (formerly called the Citizens' Canal), also has an appropriation dating from 1882, but the main canal was not built until later. It leaves the river above Monte Vista and runs south across district 21, finally tailing into the Conejos in district 22. Its claimed available area is 45,000 acres. Its capacity of 650 second-feet is fully sufficient for this amount.

The Empire Canal, No. 214, comes next in the list of large canals. Its first decree runs from 1883, but the main work of construction was not done until 1887 or 1888. Leaving the Rio Grande near Monte Vista, it runs southerly across district 21 into district 22. The returns assign it an available area of 50,000 acres. Its capacity of 1,000

[1] Public document.

having a capacity of 100 second-feet or more. As the mean s
flow of the Rio Grande at Del Norte is less than 1,500 secon
while its minimum goes down during the irrigation season be
second-feet, it is easy to see that these canals stand but little
of getting water for any large portion of the arable land cov
them. At the time they were built, however, there had been
three successive years of heavy snowfall, and the river was c
each summer much water beyond that used by the existing
It was known even then that there was not a water supply s
for all of the projected canals, but the manager of each of t
construction companies pushed the completion of his canals,
to obtain by some means a right to all the water, thus leav
rivals with none.

A good many immigrants settled under the large canals imm
after their construction, and the ditch owners also farmed on
scale for two or three years, about 1891 and 1892. It is sta
the Empire watered 75,000 acres in 1892. I have estimate
served for that year. In the returns for 1896 it is credited w
ing but 7,450 acres. Some 50,000 acres were watered in 189
canals north of Alamosa, where the area tilled in 1896 was sm

About 1892 the canal companies got into financial difficul
internal dissensions and the bonanza farming was abandone
residents of the valley say that more land is tilled now than
but I do not quite credit the statement. While there are
more resident farmers than in 1892, each on 80 or 160 acres
it takes a large number of them to farm 40,000 acres, as did
ers of the Empire.

District 20 was first adjudicated in 1891, but readjudicate
winter of 1895–96. My work, as before stated, is based on
decree. The new decree gives appropriations aggregating on
2,660 second-feet against an award made by the first decree
5,560 second-feet. The first adjudication named 272 dite
these, the second decree omits 12, 6 being noted as having wat
in the Rio Grande Canal and the last 6 of the first decr

s on the Rio Grande below Del Norte with the exception of
airie No. 249, and gives the average flow of the tributaries,
er with the acreage watered on each, all of the flow returned
; been used for irrigation. I have entered on the eleven detail
of this district the returns for 1896, distributing among the
s on each branch stream the total returned acreage thereon in
tion to the size of their decrees. There were then a few small
s without any return, and I assigned an assumed acreage, based
decree of 1896, thinking that the latter was more likely to indi-
e acreage now watered than was the decree of 1891. The num-
d size, however, of the ditches on which no return is made is
the whole area filled in by assumption as above described
g only about 2 per cent of the total area watered in the district.
aside from the Prairie, which, although in use, was by some
ght omitted from the returns. For it I assumed 5,500 acres,
the assumption on the decree for 1896.
rever the returns charged more than 4 acre-feet of water to
e of land I reduced them to that amount in accordance with
n and for the reasons before outlined. Only 34 out of the 266
s were over charged. When these reductions are made, the
e for the whole district is some 1.85 feet of water used per acre
irrigated in 1896.
returns for 1895 give a total acreage for 16 of the larger ditches,
is 20 per cent greater than the returns for the same ditches in
In assigning acreage for the other ditches for 1895, however,
l but 10 per cent to the area of those ditches for 1896, thinking
e amount of land watered under the smaller ditches was not so
o change as under the larger ones. In this way the acreage
5 was made up.
to 1895 I assumed that the areas under each ditch would be
ie as that of 1895 until some of its decrees lapsed, except in the
f 9 of the larger ditches. I had assigned to the Prairie 5,500
or 1895 and 1896. This I carried to 1892, but gave it 4,500 in
d 3,500 in 1890. To the Excelsior, Rio Grande, Monte Vista,
, San Luis Valley, Costilla, Farmers' Union, and Kenelworth,
ied the areas given in the table on the last sheet of the sum-
or district 20, this table being made up from average of infor-
obtained in various places.
1892 back the area of each ditch was reduced in the propor-
its lapsing decrees, as before fully explained.
return for 1895 charges to the 16 ditches returned a total of
acre-feet of water used on 126,540 acres, or an average of 6.6
et per acre. The other ditches on the Rio Grande below Del
auging station watered about 22,000 acres in 1895. If these were
l with the same proportionate use of water as were the others,
al charge for 1895 would be 970,000 acre-feet. As the total
d flow of the Rio Grande past the Del Norte gauging station
pril 1 to September 30, 1895, was but 545,000 acre-feet, it is evi-
at no dependence is to be placed on these returns so far as they
o the amount of water used, although the acreage is probably
eliable.
studying the table of gauging at Del Norte, to be described
in this report, and Mr. Anderson's statement, I have assumed
owing use of water in district No. 20:
1887, inclusive, 4 acre-feet per acre.
1888 and 1889, 3.5 *acre-feet* per acre.

all the time since any shortage commenced to be felt in the
For the others, the amount is determined in a measure from th
ings at Del Norte, remembering that all the water of the six
between April 1 and September 30 can not be used, as som
before and some after the irrigation season and some comes
the spring flood, when it is not at all probable that the whol
the river would be used. The totals for the district are enter
by sheet, on the "Summary, district 20," and also in the "S
for Colorado."

The capacities given are furnished me by Mr. Anderson
intended to be actual. They are probably close approx
thereto.

VII. DISTRICT NO. 21, COLORADO.

Area, about 550 square miles.
Adjudicated, July 11, 1888.
Number of ditches, 75, shown on three sheets.
Number of separate decrees, 91.
Summation of decrees, 1,877.67 second-feet.
Capacity of ditches, 799 second-feet (actual).

District No. 21 comprises the drainage of Rios La Jara
mosa, including that of Hot Creek. The streams all flow
through long, deep cañons, widening occasionally into little
The first settlements were made in these valleys. About th
of Hot Creek the two rivers, there close together, enter the l
ley and then run easterly to the Rio Grande nearly parallel
1 to 2 miles apart. Only in flood time does the water of eit
reach the main stream or even enter the valley. Nearly al
up on the little valleys of the cañons and a high mesa betw
Creek and the Alamosa, watered from the latter, and what
the ditches sinks into the ground and probably goes to the s
the shoal La Jara artesian basin, for around the town of La J
ing wells, with light pressure, are obtained at a depth of fr
50 feet.

PAGE NOT AVAILABLE

e fact that 1895 was a year of good water supply after the middle of ly, the returns for that year charge more than 4 acre-feet of water r acre to a large number of the ditches, or to 40 out of the total of 75. it the acreage under these ditches was small compared with that rved by the other 35, so that, after reducing all excess charges to 4 re-feet per acre, the average for the district amounts to 2.6 feet per re. This is to be expected, as there is said to be a shortage always the district, as there is much more good land under ditch than the ter will supply.

The returns for 1896 give an excess of water in 13 ditches, all small airs. When these are reduced to 4 acre-feet per acre the average the district is 0.7 acre-feet per acre. The area watered in 1895 s about 3,500 acres more than in 1896. The returns for 1896 give, before mentioned, the names of five ditches without decrees, but statements of areas watered. Their names are: J. A. Ortiz, El miso, Damien Nunez, Ramon Domingo, Frank de Herera. They probably small affairs and cut no material figure in the totals.

he greatest acreage of the district was probably in 1891. I assumed the year an increase of about 10 per cent over 1895, and for 1889 ut the same as for 1895, making the assumed acreage the following the years after the decree:

	Acres.		Acres.
	42,000	1892	45,000
	42,000	1893	44,000
	44,000	1894	42,000
	46,000		

e decrease of acreage in this district from 1891 to 1896 was prob- due to the short water supply of the intervening years. As the ly is normally short in this district, any diminution thereof would ore quickly felt than in the other districts.

ior to 1885 the acreage in the district was small and principally land, so I assumed 4 acre-feet used on each acre watered prior 85, including that year. In 1886 acreage was increasing, and I med 3.5 acre-feet per acre. In 1887, 1888, and 1889 there was a cient water supply in the valley as a whole, but the acreage in ict 21 was increasing quite rapidly and the water supply was appropriated. I therefore assumed for those years 3 acre-feet of r used per acre irrigated. From 1890 to 1893, inclusive, the sup- of water was short, and the amount used here is assumed to be 2 per acre. In 1894, when it was very short, the assumption was cre-feet per acre. The returns show 2.6 acre-feet per acre for , and 0.7 for 1896, as before stated.

rior to the decree given in 1888 the same method was employed to in acreage as was used in district 20. From the acreage thus ined and the above assumptions as to use of water the "Summary ict 21" was made up from the three sheets and the totals carried it to the summary for Colorado.

VIII. DISTRICT NO. 22, COLORADO.

a, about 550 square miles.
judicated, 1890.
mber of ditches listed, 110 shown on five sheets.
e 3 Taos Valley canals are rejected from the totals for reasons fully given er on, leaving 107 ditches carried to the summary.)
mber of separate decrees, 142.
mation of decrees, 2,978.42 second-feet.
acity of ditches, 1,034 second-feet (actual).

to the Conejos, as before mentioned. It is my belief, howev
no land in the district was ever watered from it.

In 1888–89 a company named the Taos Valley Irrigation C
constructed in this district three large canals known as Taos
canals Nos. 1, 2, and 3, each with an original carrying cap
over 500 second-feet. No. 1 was built for the purpose of di
water from the Conejos to the San Antonio River, reaching th
stream about a mile south of Antonito. Here a dam was throw
the river, and canal No. 2, heading at the south end of the d
built through the solid lava rock to the State line, reaching
5 miles southeast of the dam. Canal No. 3 also headed in
Antonio several miles below the head of No. 2, and ran to th
east. It was the intention of the promoters to water a large
land in New Mexico, but they found that in order to reach t
their canals would have to be dug through solid rock for man
that only a small percentage of the area they would cover was
and that the water rights granted them in the decree of 189
making the grand showing on paper of 500 second-feet for eac
or 1,500 second-feet in all, were valueless, as all of the mean
the two rivers was absorbed by prior appropriations.

The original promoters therefore dropped the scheme and th
holders took hold. The latter built a reservoir under cana
called Cove Lake, whose capacity is said to be some 9,700 a
When they got it built, however, they discovered that there w
a thousand acres or so of arable land commanded by it. T
they have attempted to colonize, but so far have failed, and
from a conversation I had with their manager in Antonito t
are about to abandon the project. No land has ever been wat
these three canals, although canal No. 2 ran full during the
flood for several years. The water was turned loose at its lo
onto the mesa and found its way into the cañon of the Rio
somewhere below the Colorado line. On account of these co
I have thought it best to omit these three canals from the tota
giving them in the list of ditches for this district because I

ıllу measured, the capacities given are no doubt near approxima-
ons to the true capacities. It is in this district that the actual
pacities amount to 1,034 second-feet, the decree to 2,978.42 second-
et, and the claimed capacities to about 4,000 second-feet, all of
ese totals exclusive of the Taos Valley canals.

The returns for 1896 give an aggregate of 60,625 acres watered dur-
g the year, and surplus water for 19 of the 107 ditches returned.
hen these are reduced to 4 acre-feet per acre, however, the average
the whole district is but 1.75 acre-feet per acre.

Mr. Dalton stated that to the best of his recollection about 40,000
es were watered in 1893, 46,000 in 1894, and 51,000 in 1895. I am
lined to the belief that his figures are small, as he is a conservative
n.

From all I can learn, I judge that the acreage of 1890, the year of
decree, was about that of 1896, and so have assumed the follow-
acreages for the respective years:

	Acres		Acres.
.....	60,000	1893.....	45,000
.....	55,000	1894.....	50,000
.....	50,000	1895.....	55,000

ack of 1890 the acreage is computed by the lapsing of the decrees,
n districts 20 and 21.

his district has generally had a very good water supply, so prior
890 I assumed 4 acre-feet per acre. As there was a shortage in
entire valley in 1890, 1891, 1892, and 1893, I assumed 3 acre-feet
l on each acre in district 22. In 1894, when the drought was more
re, I assumed 2.5 acre-feet per acre, and in 1895 3 acre-feet per acre.
he last-named year there was an abundance of water after July
nd the grass lands would have used the full amount of 4 acre-
per acre, but the large Mormon population around Manassa and
raim raise principally wheat and oats, and this water came too
in the season for them, so that I assume an average for the dis-
of 3 feet per acre.

ith these assumptions are made up the two sheets headed "Sum-
y district 22," and the totals are carried therefrom to the sum-
y for Colorado.

IX. DISTRICT NO. 24, COLORADO.

ea, about 700 square miles.
ljudicated June 14, 1889.
umber of ditches listed. 25, shown on one sheet.
umber of separate decrees, 23 (two ditches have no decrees).
mmation of decrees, 265.50 second-feet.
pacity of ditches, 356 second-feet.

istricts No. 24 and 35 lie entirely within the Sangre de Cristo
nish grant. That portion of this grant included in district No.
together with a large area in New Mexico, is known as the Costilla
te, while the portion which forms district 35 is called the Trinchera
te.

istrict No. 24 covers the drainage of Rio Culebra and that portion
ıe Rio Costilla drainage lying in Colorado. Its surface outside of
mountains is more uneven than is that of the rest of the valley,
San Luis hills and San Pedro mesa breaking up the western
ion.

ıe returns for 1896 give the actual capacities of the ditches, not

called Culebra Range). So that, while the years 1890, 1891, 18
and 1894 were years of scanty water supply for the valley in g
I assumed the following use of water in this district: 1890,
feet per acre; 1891 and 1892, 3.5 acre-feet per acre; 1893 an
3 acre-feet per acre.

In 1895 I assumed 4 acre-feet per acre, and prior to 1890 4 a
per acre also.

As there was but one sheet of the list of ditches for this d
there is no summary sheet, but the totals are entered directly
summary for Colorado.

X. DISTRICT NO. 25, COLORADO.

Area, about 950 square miles.
Adjudicated March 28, 1890.
Number of ditches listed, 171 on seven sheets.
Number of separate decrees, 235.
Summation of decrees, 919.18 second-feet.
Capacity of ditches, 2,501 second-feet (from decree).

District No. 25 covers the whole western slope of the San
Cristo Range north of Sierra Blanca, its western boundary bei
Luis Creek on the southern half and the divide between it a
Saguache on the northern half. There are no large streams or
in the district, but its water is carried in many small creeks.
result the number of ditches is large in proportion to the area w
The Luis Maria Baca Spanish grant No. 4 occupies about 150
miles of the best portion of the district and has on it some 2
ditches.

No water from either district 25 nor from 26 or 27 ever reac
Rio Grande on the surface. Near the south end of the dist
the line between it and district 20, you will notice on Exhibits
B[1] several small lakes. These are called the San Luis Lakes
larger is about 2½ miles long, with an area of about 1,500 acres
smaller ones have areas of from 100 to 300 acres each, the tot
of all being somewhere between 2,500 and 3,500 acres. Thes

The returns from this district are complete for both 1895 and 1896, ut I doubt their accuracy for either year. In both years each ditch charged with carrying its full decree for the season, which is given ; from fifty to one hundred and twenty days in 1895, but is averaged r the whole district as sixty-five days in 1896. After reducing the cess returns for 1895 to 4 acre-feet per acre, the total gives 3.77 acre-et per acre used that year. This is likely to be something near the rrect amount. In 1896, however, the returns give over 2.5 acre-feet er acre, and this I believe to be largely in excess of the amount used. have no means of correcting it, however, and so must let it go as it is. The returns for 1895 give 1,515 acres watered by ditches without ecrees, and for 1896 1,625 acres, but no statement as to the number r capacity of the ditches serving this land. Whatever their num-er, it is likely that they were built soon after the decree was given 1890, as the dry years of 1891, 1892, 1893, and 1894 would discour-ge the construction of new ditches. In 1896 there was a little over 000 acres more cultivated than in 1895, and the acreage for 1896 ould just about equal the amount the decree was supposed to cover, hich, at 50 acres per second-foot, would be about 46,000 acres for e decree of 919.18 second-feet. I therefore made the following ssumptions as to acreage:

Prior to 1890, and 1890, assume full decree cultivated, decreasing e amount as the decrees lapse; 1891, assume 800 acres more than ecree, this for new ditches; 1892, assume 1,600 acres more than ecree, this for new ditches; 1893, assume decree; 1894, assume 1,500 res less than the decree.

While the district receives its water supply from the western slope the Sangre de Cristo Mountains, the same as does district 24, the ater is all carried in small streams, and so the shortage of the years ter 1890 was probably felt more severely here than in district No. 24. therefore assumed the following use of water:

For 1889 and prior thereto, 4 acre-feet of water per acre; for 1890, 91, 1892, and 1893, 3 acre-feet of water per acre; for 1894, 2.5 acre-et of water per acre.

From these assumptions the three sheets, marked "Summary dis-ict No. 25," were made up, remembering that sheet No. 7 of the list ust carry, in excess of the amount due from its decrees, the several nounts allowed for ditches without decrees, viz, 800 acres in 1891; 600 acres in 1892, 1893, and 1894; 1,515 acres in 1895, and 1,625 acres 1896. The totals were carried to the summary for Colorado.

In this district the water commissioner returned the capacity of itches mentioned in the decree, summing 2,456 second-feet for the 171 itches besides 45 second-feet allowed the ditches without decrees. There is no probability that the total capacity of ditches in this dis-rict exceeds or even equals the decree, viz, 919 second-feet.

XI. DISTRICT NO. 26, COLORADO.

Area, about 900 square miles.
Adjudicated November 23, 1889.
Number of ditches listed, 184 on eight sheets.
Number of separate decrees, 207.
Summation of decrees, 561.76 second-feet.
Capacity of ditches, 1,509 second-feet (from decree).

District No. 26 covers the drainage of Saguache River and its tribu-aries. Fully three-fourths of the land watered is hay land and pasture

corresponds fairly well with the number given in the decree.
tified as many as possible, and then added to the total return f
identified the balance of the return to obtain the total for the

The return for 1896 gives 20,205 acres irrigated, while the
given in 1895 is 16,850 acres. It is likely that the preceding f
years had discouraged the farmers, and so less acreage was cul
in 1895, but the copious rains of that summer encouraged
expand again in 1896. As the returns can not be completely id
either for 1895 or for 1896, the only course open for me is to pro
among the several ditches the total acreage according to th
their decrees. The acreage for 1895 gives 30 acres per second
decree, and that of 1896 gives 36 acres per second-foot, the tota
being 562 second-feet. While this decree was based on 50 a
each second-foot, it is not likely that the average amount ever e
40 acres. This I have assumed as the condition in 1889 and 1
years of probable maximum for this district, or, there being 562
feet of decree, an acreage of 22,500 for those years. I proportio
decrease from 1890 to 1895 among the different years. Prior
the acreage is deduced from the decrees, as in the other distr

The water in this district is overappropriated, as is shown f
returns for 1896, charging an average of but 0.8 acre-foot o
to each acre irrigated. Prior to 1880 the acreage was abou
fourths of the amount now cultivated. It is likely that ev
the water supply was scanty. I assumed 3 acre-feet per a
all years shown in the summary up to and including 1889. F
1891, 1892, and 1893, 2 acre-feet is assumed, and for 1894, 1.5, a
this being the driest year prior to 1896. In 1895 I could not
the returns, and so assumed 3 acre-feet per acre.

From these assumptions is made up the summary by sheets
district and the totals are carried to the summary for Colorad

The return from this district gave no capacities, and I es
the capacities indicated by the sizes mentioned in the decree.
these total 1,509 second-feet for the district, it is not likely
total capacity of the ditches exceeds or even equals the dec

No. 27 covers the drainage of Carnero and La Garita is a small and unimportant section. The irrigation is old, ›ack to 1880.

rns for 1895 give a total acreage of 4,040, over 3,000 acres s natural grass, while those for 1896 give but 2,670. No ı for this sudden and large decrease of area is given. The ption for acreage prior to 1895 that I can reasonably make 00 acres, including pasture land, have been watered each to 1895, and this is done in the total summary sheet. This ı, however, gives an average of about 90 acres of land each second-foot of decree. The only explanation of this ge I can offer is, that pasture lands are not included in the are actually watered when there is a sufficient supply and ed in the returns as natural grass. When water is short, they are not watered. This would also account for the rease in 1896.

ırns for 1896 show 2.6 acre-feet of water used per acre. stributed uniformly among the ditches. The returns for such shape that the different ditches can not be identified, ompute the total amount of water used. As there seems ›d supply for the land watered, I assumed 4 acre-feet per ınd including 1889, 3 acre-feet per acre for 1890, 1891, 1892, .5 acre-feet per acre for 1894, and 4 acre-feet per acre for ile the amount per acre assumed for 1894 is less than that re in 1896, the acreage for the former year is assumed to eater than was that for 1896, so that the total amount of l in 1894 is considerably more than the returns show for

cities given are taken from the decree, and are not reliable.

XIII. DISTRICT NO. 35, COLORADO.

t 500 square miles.
cated.
ditches listed, 48 on two sheets.
f ditches, 346 second-feet (actual).

No. 35 includes the drainage of Sangre de Cristo and Trinks, and covers that portion of the Sangre de Cristo grant ıown as the Trinchera estate.

rigation is old in this district, some of it dating back to ›urts have not yet adjudicated it, and there is no water ıer in the district. Mr. Flores and I spent a day at and nd, and gathered the data from which the table is made up. tches are arranged according to their position on the draining from the head of the stream downward instead of ally, as in the other Colorado districts. I did this because ıre as to the date of construction of many of the ditches in and did not wish to make up a list which might do injustice them.

r supply of this district is small, not being enough to water f the available land. With two exceptions the ditches are each waters but one man's land. In 1888 two large canals , one heading on Trinchera Creek and one on Sangre de k. Each claims an appropriation of 212 second-feet, and ow carry 100 second-feet; but there is practically no water ›ne, and the amount of land served is small.

no record of decrees carried out to the hundredths of a sec
the returns here given are fully as reliable as those from t
Colorado districts.

With the assumptions above given, the summary for the
was made up and the totals transferred to the summary for C

XIV. RÉSUMÉ OF COLORADO STATISTICS.

This completes the detailed description of the Colorado i
in the Rio Grande drainage. The total number of ditch
(see last sheet of summary for Colorado) is 925, with a stated
of over 12,700 second-feet and a probable actual capacity
10,000 second-feet. Of these, 877 are authorized by law to di
12,200 second-feet of water. Their owners claim that 635,00
land are "under ditch," or that the ditches can now serve that
The maximum area watered in the valley was in 1892, wh
400,000 acres were served. This dropped to 340,000 acres in
320,000 in 1896, but will probably increase slowly hereafter,
the maximum above given is not likely to be reached aga
storage reservoirs are built, for the land now irrigated dem
full water supply of the valley. I will discuss the reservoir
before closing this report.

It is likely that the total acreage given in these tables is
per cent of the amount cultivated during 1895 and 1896. T
gate statement of amount of water used during those years is
within 15 or 20 per cent. Prior to 1895, however, the state
the acreage may not be nearer than 15 per cent, and the s
of water may not be nearer than 25 per cent, or possibly 30 pe
the actual quantities in each case. I think that these perce
error in the totals are maxima, as a large error one way on
or in one district may be balanced by an error the other way i
district.

Owing to the method adopted by stopping acreage when
stops, before explained, the acreage is sure to be large eno

PART NOT FILMED

ng you will find a tabulated statement of the allowances of ıde for the several years in the various districts of the San l this information is given under the discussions above, but d here for convenience of reference. The quantities are in of water charged to each acre each year and for each district d.

Estimated use of water—San Luis Valley, Colorado.

Year.	District.							
	20.	21.	22.	24.	25.	26.	27.	35.
.....	4	4	4	4	4	3	4	4
.....	4	4	4	4	4	3	4	4
.....	4	4	4	4	4	3	4	4
.....	4	4	4	4	4	3	4	4
.....	4	4	4	4	4	3	4	4
.....	4	4	4	4	4	3	4	4
.....	4	4	4	4	4	3	4	4
.....	4	3.5	4	4	4	3	4	4
.....	4	3	4	4	4	3	4	4
.....	3.5	3	4	4	4	3	4	4
.....	3.5	3	4	4	4	3	4	4
.....	3	2	3	4	3	2	3	3
.....	3	2	3	3.5	3	2	3	3
.....	3 for first 150 days; 2 for rest.	2	3	3.5	3	2	3	3
.....	3 for first 150 days; 2 for rest.	2	3	3	3	2	3	3
.....	3 for first 150 days; 1.6 for rest.	1.5	2.5	3	2.5	1.5	2.5	2.5
.....	3 for first 150 days; 2.3 for rest.	2.6	3	4	3.8—	3	4	3.4—
.....	3 for first 150 days; 1.65 for rest.	.7—	1.75	3.2	2.56	.8	2.6—	2.5—

IRRIGATION LAW AND PRACTICE IN NEW MEXICO.

exico has no working irrigation law. I think that the last e passed a bill to regulate the use of water, but it has not rced. There is no Territorial engineer or other officer hav- ol of the distribution of water. Whenever the owners of a ık that some acequia built after theirs, but higher up the diverting water which rightfully belongs to them, they can he district court for an injunction restraining the owners of litch from taking the water, and possibly, months after their ruined, win their suit. The few rights of the Territory ve been adjudicated have gone through this process.

ıorthern third of the Territory, where the waters are moder- from silt, and hence very little work is needed to keep the working order, the only official of a community ditch organ- a mayor-domo, whose duty it is to distribute the water among ent claimants under the ditch.

south, where the water carries much silt and the ditch frequent and extensive cleanings, the organization consists, ın to the mayor-domo, of one or three commissioners. The ıghly measure the land each man wishes to irrigate each assess him a certain amount of work each week on his hold- devoted to cleaning the ditch of sediment whenever such s necessary. The amount of the assessment varies with the of the ditch and the amount of silt usually borne by the ım a day's work per week for 5 to 8 acres of land watered in

done by Mexicans, and they cultivate largely varying areas i
ent years. The areas given in the tables of New Mexico dit
means, as near as I could judge, of the areas cultivated. A
the commissioners along the Rio Grande ditches were able to
statements of acreage which were pretty close, but where th
no commissioners it was difficult to learn the areas watered.
ever land I saw I estimated as well as possible, and obtained
inhabitants their estimates also as a check on mine.

In considering the information relating to New Mexico the
of obtaining it must be borne in mind and due allowance n
its probable error. I believe that the total area of irrigated la
for each district is within 15 per cent, and possibly within 10
of the area actually watered an average year. The stateme
total amount of water used, however, are not so close, beca
difficult to say how much water is used per acre. I should
the latter statements are within 25 per cent of the true an
water used. They show, however, relative amounts for the
years within what is likely to be a nearly constant perce
approximation, and so will serve the purpose of determining
tive use of water each year since 1880. These remarks app
Colorado data as well.

That there have been years of scanty water supply betw
and 1896 I do not doubt. In a few cases I have been able
them for small areas, but not with sufficient certainty of the
the shortage to justify me, except in the case of the year 188
ing that there was a short water supply a certain year all
Territory. The year 1889 was, I believe, however, a short yea
whole Territory except the Chama and northern New Mexico
That season the Rio Grande was dry at El Paso for several
after July 15, showing that the usual summer rains of the Pu
adjacent drainages did not come. In the whole Territory, ex
extreme northern portion, partial dependence for water is p
the summer rains. So I have in all districts, except 1, 2, a

PART NOT ORIGINAL

umed numbers, names, and drainage areas are about as fol-
ıg outlined by red lines on Exhibit D:[1]

Name.	Approximate drainage area.
	Sq. miles.
onio	250
	3,300
ssa	710
sa	480
Creek	430
·uz	480
ı (Rio Grande)	1,050
ı Creek	480
	1,400
	900
lbuquerque (Rio Grande)	830
lbuquerque (Rio Grande)	940
	6,400
ı Berendo	5,500
(Rio Grande)	800
Rio Grande)	600
'alley (Rio Grande)	150
unassigned territory west of river (no water)	2,300
unassigned territory east of river (no water)	4,000
ıal New Mexico drainage of the Rio Grande, as before	31,000

ill be considered in the order of the numbers, although here
geographically. The system of numbering used is adopted
ace the study of the Rio Grande valleys together.
ıles showing the ditches in each district are made up with
olumns, headed and filled in as follows:
mber of ditches," being the number of ditches described on
As there were many groups of small ditches which could
ı described in a body, I have thought best to do this in order
ıe lists as short as possible. This first column is simply to
ɣetting the total ditches described on each sheet.
mber on stream," calling the ditch highest up on each
ı. 1, and numbering downstream.
me." Where a ditch has no specific name I have marked it
" It is a general rule that where a ditch serves two or more
as a special name, while many serving but one farm have
s; so that it is safe to assume that all those marked "Pri-
ɣe but one farm.
eam," being the source of water supply.
ıen built." Whenever possible, I obtained the date of con-
of each ditch listed, but when I could not obtain that I
e existence of a ditch back as far as possible, and then
as built before the earliest date at which I satisfied myself
ıse.
ɔroximate location of head," given in Land Office terms
: The surveys of the public lands of New Mexico are based
ıial point at San Acacio, on the Rio Grande, about 10 miles
mouth of the Puerco. Through this initial a meridian was
ıorth and south and a base line due east and west. The
'as then cut into townships 6 miles square and these into
mile square. These townships are numbered north and
l east and west from the initial point, the number of the
ı north or south being called townships (usually abbreviated

[1] Public document.

7. "Capacity." Being the estimated carrying capacity of ditch in cubic feet of water per second.

8. "Total capacity." This column is put in to facilitate the tion of capacity on each sheet, as on nearly every one there w some entries of several ditches on one line which have the av capacity of each entered in column 7, and an attempt to sum umn 7 is confusing.

9. "Acres irrigated." Being the mean area, unless otherwise s

10, 11, 12. "Acre-feet of water used in 1894–1896." See ex tion below.

13. "Remarks," which are self-explanatory.

In figuring the amount of water used, I have in no case al over 4 acre-feet per acre, as I believe this to be the maximum a used in New Mexico, as well as in Colorado. I have allowe freely, however, even on grain land, whenever there is a good supply, unless the surroundings were such as to point conclusiv a smaller use of water. It is not likely that over 2 feet i actually used to raise a crop of corn, nor over 3 feet for a c wheat, but in places much water is run into low places and evapo and in the northern part of the Territory they frequently ir heavily in the fall so as to sprout the weed seeds and so kill th frost, so it is likely that nearly or quite 4 acre-feet is diverted f stream when the water is to be had, and not returned there each acre watered, even when planted in corn.

These tables show no columns of decrees, or the amount a di legally entitled to take from a stream, as your letter of instru directed me to show, because, as no adjudication of New M ditches has been made, they have no legal title to any water.

XVII. DETAILED DESCRIPTION OF NEW MEXICO DITCHES OU OF RIO GRANDE.

1. DISTRICT NO. 1, SAN ANTONIO.

Area, about 250 square miles.

ı never been a shortage of water in the district. So I have allowed ı maximum of 4 feet per acre for all years except 1896. In the last-med year the two lower ditches on San Antonio Creek are charged :h but 3 acre-feet per acre.

All totals from this, as well as all the New Mexico districts, are tered directly onto the summary for New Mexico, the total acreage each year being obtained, unless otherwise stated, by deducting m the acreage shown on the detail sheets that portion of it charged ditches built after the year in question.

2. DISTRICT NO. 2, CHAMA.

Area, about 3,300 square miles.
Number of ditches listed, 123, shown on three sheets.
Aggregate capacity, 1,016 second-feet.
Acres watered, 27,520.

The area I have assigned to district No. 2 comprises the whole ama drainage except an area of some 4,500 acres, which is watered ditches taken from the Chama but lies in the Espanola Valley, and included in the Espanola sheet. This district lies between the nejos Range, whose summit prolonged south into the Black Mesa unds it on the east, and the Continental Divide, which forms its stern limit. It reaches from the Colorado line (a small portion ing, in fact, in that State) to the Jemez Mountains on the south.

Taken as a whole, this drainage is very broken, and in parts it is untainous, the northern portion occupying the forks between the ntinental Divide and the Conejos Range. It lies at an elevation ove sea level of from 6,000 feet near the mouth of the Chama to over ,000 feet on the Conejos Range. The heavy snow fall of that range rnishes the principal source of water supply, as the snow and rain-ll on the Continental Divide to the west is light in winter. Summer ins along it, however, frequently send large and sudden floods down e river, when it delivers the first silt-bearing waters which enter the o Grande.

The main Chama has but little valley land along it above Abiquiu, cept a small area reaching from the town of Chama down the river Puente Plaza, just below Parkview. The two largest cultivated eas in the district are the mesa lying around Parkview at the mouth the Brazos or East Chama, as it is locally called, and El Rito Valley. e first usually has an abundant water supply from the Brazos, while e latter is always short of water.

Up the drainage of the Rio Caliente, which flows south close under e western toe of the Black Mesa and includes the Tucas or Petaca d Vallecito, there are numerous narrow valleys for which there is vays an abundant water supply.

West of the Chama and north of the Gallinas drainage the country broken and valueless for agriculture, although much valuable pine ber is found there, as well as on the head of the main drainage d down along the Conejos Range as far south as Mitritas Creek.

In the southwestern portion of the drainage on Rio Puerco and Rio llinas (this Rio Puerco being a branch of the Chama, and not the ge torrential stream of that name, which lies farther south) there a large area of fertile land, but a very scanty water supply. Out probably 50,000 acres of good land on the Gallinas only 400 acres cultivated, and even that small area is never fairly well supplied

I found it impossible to obtain any reliable information as t
(if any) after 1880, when the water supply was abnormally s
this district. I therefore, for the years prior to 1894, assum
maximum use of 4 acre-feet per acre for all lands having a goo
supply, 3 acre-feet per acre for that having a fair supply, in
the Upper Nutrias, the Cebolla drainage from 1887 to 1890, t
jilon prior to 1890, and El Rito prior to 1886; 2.5 acre-feet p
for Canjilon in 1891 and 1892 and El Rito in 1887 to 1890, and
for those two sections until 1893 and for the Puerco and C
country from 1880 on. This is based on a statement that the
and Conjilon water supply has been shrinking since 1887, and a
gradual decrease of water supply at El Rito.

The detail sheets show the amount charged to each ditch
years 1894, 1895, and 1896.

3. DISTRICT NO. 3, CERRO MESA.

Area, about 710 square miles.
Number of ditches listed, 28, shown on one sheet.
Aggregate capacity, 194 second-feet.
Acres watered, 9,280.

The country assigned to district No. 3 reached from the Rio
Cañon on the west to the top of the Sangre de Cristo Range
east, and from the Colorado line, on the north, southward as fa
Rio Hondo, including the irrigation in the valley of that stre
excluding an area of 1,500 acres which is watered by a ditch f
Rio Hondo, but lies on the Taos Mesa and is included in dist
4. It includes that portion of the drainage of Costilla Cree
lies in New Mexico, that of several small streams flowing
Cerro Mesa, Red River, and Cabresto Creek, Lerma Cañon, S
tobal and Lobo creeks, and Rio Hondo. The northern port
tains a large, smooth mesa, called Cerro Mesa, which reach
the Colorado line to Red River, and forms a fine body of gra
lying at an elevation of about 8,000 feet, or a little less, above s

y supply. In 1883 their crop was a failure from lack of water. 86 some Americans settled on the streams below the Cerro ditch y some means obtained a court decision or a compromise with lexicans of Cerro Plaza, which awarded to them one-fourth of ater in the creeks. The result is that the supply of water, ly scanty, is spread over a larger area than before, all are very , and only partial crops are raised each year.

e town of Rio Colorado, located at the junction of Red River and sto Creek, was founded in 1842, and irrigation soon spread over uth end of the Cerro Mesa, the Llano ditch from Cobresto Creek built in 1851. The people are good farmers, who do not waste water. For this reason I have allowed but 3 acre-feet per acre the main ditch here and 3.5 acre-feet per acre under the next e instead of 4 acre-feet.

San Cristobal Creek the water supply is just about enough for nall amount of land under ditch. On the Lobo the supply is and several men who have tried to farm there have abandoned tempt.

Rio Hondo supply is usually good.

uld locate no years of special drought in this district except 1883, have estimated a uniform use of water.

4. DISTRICT NO. 4, TAOS MESA.

about 480 square miles.
ber of ditches listed, 61, shown on one sheet.
city of ditches, 346 second-feet.
watered, 18,050.

tching from the brink of the Rio Hondo Cañon southward to t of the Picuris Mountains—some 20 miles—is a level mesa forms the most historic portion of New Mexico outside of the Santa Fe. It is called the Taos Valley, but is really a high ome 7,000 feet above sea level, and lying between the foot of ngre de Cristo Mountains (locally called Taos Mountains) and ñon of the Rio Grande. The area of arable land is fully 40,000 but the water supply is only sufficient for about half this land, has been fully utilized for over forty years. This section I ade district No. 4, its boundaries being the Rio Grande Cañon west, the top of the range on the east, the south side of the Rio Cañon on the north and the top of the Picuris Mountains on th. It is watered by Lucero, Pueblo, and Taos creeks, Rio to, and the Rio Grande del Ranchos de Taos. All these streams now water from the high divide, run in canyons until the plain hed, and then cross it in shallow channels. Up Taos Cañon merous small valleys, each occupied by a small ranch and ditch, valleys are found on the other streams.

Mexican settlement of Fernandez de Taos was made about 1800, ly prior to that time, and the settlers found the land along and Pueblo creeks already occupied by the Taos pueblo of s, who had lived there for an unknown length of time. Prior the Arroyo Seco settlement was started on the north end of sa, water being first taken from Arroyo Seco and then by an ion to the ditch southward along the foothills from Lucero It was soon found that this source of water supply was uncer- nd in 1830 a ditch was taken out of the Rio Hondo and brought

age years, and so have assumed that the use of water show
sheet for those years is a good average for the use during t
prior thereto except 1889. For 1889 I deducted 15 per cent
amount charged to the other years, thinking that the shortag
year, due to small rainfall, would have been felt here to t
amount. The detailed estimate made under each ditch shows
age for 1896 of about 1.75 acre-feet per acre.

5. DISTRICT NO. 5, EMBUDO CREEK.

Area, about 430 square miles.
Number of ditches listed, 32, shown on one sheet.
Aggregate capacity, 236 second-feet.
Acres watered, 9,120.

South of the Picuris Mountains is the drainage of Embud
made up of the main stream, called Penasco on its upper
Picuris or Pueblo Creek, Las Trampas, and Ojo Zarco creeks

The main stream joins the Rio Grande a short distance al
railroad station of Embudo, near the north end of Espanola
The surface of this district is broken, each stream flowing i
valley, which widens occasionally to a mile between the hill
generally narrow. The Picuris and Penasco head on the ra
carry a large and constant volume of water. Las Trampas
fair supply, but Ojo Zarco is a very small stream.

The valleys in this district were occupied by Mexicans at
date, probably about 1815, but the Picuris pueblo of India
already on Picuris Creek, and had been there for an unknow
of time. After the first settlement the valleys quickly filled
before 1880 even the little meadows up the Cañon of the Picu
occupied. The water supply was ample for all. In 1880 the
of the Mora grant, which lies east of the range, came onto
of Picuris Creek and diverted some of its waters through a
the mountains onto their land. There was still water enoug
until 1890, when it is stated that these people built a second d

ear. On Picuris Creek I made this allowance prior to 1889 and for at year, and afterwards I allowed 2.5 acre-feet per acre up to 896. In the last-named year I estimated 2 acre-feet per acre.

6. DISTRICT NO. 6, SANTA CRUZ.

Area, about 480 square miles.
Number of ditches listed, 43, shown on one sheet.
Aggregate capacity, 156 second-feet.
Acres watered, 5,800.

Between the drainage of Embudo Creek and that of Santa Fe reek is a rough and broken country, traversed by two main streams alled the Santa Cruz River and Pojuaque or Nambe Creek. These ead on the Sangre de Cristo Range (here called Santa Fe Mountains) nd carry from it snow water to the Espanola Valley. This area I have alled district No. 6, excluding therefrom all land watered from the anta Cruz or Pojuaque but lying in the Espanola Valley. The irriation is confined to the long, narrow valleys which border each tream. The date of settlement is uncertain, but remote, possibly as ar back as the first or second decade of the eighteenth century, lthough the Nambe and Pojuaque Indians occupied their pueblos on he more southerly stream at a period much more remote than this ate.

On Santa Cruz River the water supply is fair, but on the Nambe it s poor. There has been no known change in acreage since 1880. In 889 I deducted 15 per cent from the estimated water used in 1894, aking the estimate for all other years prior to 1894 the same as for hat year. The estimates for 1894, 1895, and 1896 are shown in detail n the sheet.

7. DISTRICT NO. 7, SANTA FE CREEK.

Area, about 480 square miles.
Number of ditches listed, 44, shown on two sheets.
Aggregate capacity, 97 second-feet.
Acres watered, 5,920.

The drainage of Santa Fe Creek forms district No. 7 and extends rom the top of the Sangre de Cristo (here called Taos Mountains) on he east to the Rio Grande on the west. After leaving the foothills ome 4 miles east of Santa Fe, the creek of that name flows in a shalow channel through a level plain for some 15 miles. It then enters a añon, which it follows to La Bajada, where it again enters an open ountry. The principal use of water is in the country around anta Fe, which, lying at an elevation of about 7,000 feet above the ea and protected by hills on all sides except the west, produces reals and apples to perfection. This valley is the most historic spot New Mexico. Here was established the nucleus of the Spanish ccupation in 1600; here were they defeated in 1680 and forced by he Pueblo Indians to abandon the country; and here they finally conuered the natives in 1692 and firmly established themselves in the ossession of the land. Even prior to 1600 the Indians occupied the te of Santa Fe and farmed the surrounding land, although the later onquest forced them to abandon their pueblo.

For a great many years the full flow of Santa Fe Creek has been tilized for irrigation, and the scanty amount of water available has een husbanded with great care and made to serve as much land as ossible. The water is alternated among the different ditches, and the

8. DISTRICT NO. 8, GALISTEO.

Area, about 1,400 square miles.
Number of ditches listed, 23, shown on one sheet.
Aggregate capacity, 60 second-feet.
Acres watered, 2,240.

The Sangre de Cristo Range ends abruptly southeast of Sa
the country rapidly falling to the south into the wide, barren G
plain. Galisteo Creek is the last stream carrying any snow
west into the Rio Grande, and its supply is small and precario

Between the Galisteo plain and the Rio Grande is a range
called the Sandia Mountains, which have a few little valleys
small supply of spring water. All this section I have placed
trict No. 8. It is a barren, desolate country. Irrigation is c
to the little valleys along Galisteo Creek and those mentione
Sandia Mountains. Around Galisteo plaza there is a large
fertile land, but water for only a small percentage of it.

All of the settlements in District No. 8 are old, antedating
many years. To all years except 1889 and 1896 I have gi
same use of water, amounting to nearly 2 acre-feet per acre, a
on the sheet; but in the two years mentioned I have allow
about 1.3 acre-feet per acre.

That portion of the Rio Grande drainage east of the river an
of the Sandia Mountains and Galisteo plain is devoid of livin
all the way to El Paso. There is not, so far as my acqua
extends, an acre of cultivated land in this whole area east
river bottom. A portion of this area is included in districts
15. The rest is unattached.

9. DISTRICT NO. 9, JEMEZ.

Area, about 900 square miles.
Number of ditches listed, 27, shown on one sheet.
Aggregate capacity, 131 second-feet.
Acres watered, 5,790.

Deep cañons lead from these parks to the lower country, where are long and narrow, but very fertile, valleys. Below these valleys the river runs through a barren, sandy country to its junction with the Rio Grande. Much of its water sinks away in the sands or spreads out and is evaporated under the hot sun, so that but little water enters the main river from it except during the spring floods.

Before the advent of the Spaniard, some hundred years or more ago, three tribes of Indians occupied their pueblos on this river. They were named the Jemez, Zia, and Santa Ana, the Jemez being highest up the river. The Spaniards on entering the country occupied a vacant body of land lying above the Jemez Pueblo and another lying below it, but above the Zia and Santa Ana pueblos, and appropriated the water which had been formerly used by the two last-named pueblos. The Santa Anas were first to suffer, and they were finally forced to take up and cultivate land on the Rio Grande, some 10 miles away. Such is the tenacity, however, with which these Indians cling to their ancient pueblos that, although this change was made nearly or quite a hundred years ago, the Santa Anas still pack the season's crop each fall over a horrible trail 10 miles up from the Rio Grande to their ancient home, steadfastly refusing to abandon it and build anew near their tillable land.

The Zia Indians still eke out a precarious existence from the use of what little water passes the Jemez Indians and the Mexicans of San Ysidro. Above them, however, there has never been known to be an injurious shortage of water until 1896, although there was a sensible diminution of the usual water supply in 1894 and 1895. I could not learn that the shortage of 1889 affected this drainage, and so have made no reduction in the estimate for that year.

There are some grass lands watered from the higher ditches, while lower down the climate is warm, evaporation great, and the soil such as will not readily return to the river surplus water. I have therefore allowed, prior to 1894, 1895, and 1896 (the allowances for which years are shown on the detail sheet), 4 acre-feet per acre for lands above San Ysidro, 3 acre-feet per acre for its lands, and 1.5 acre-feet per acre for the Zia lands.

10. DISTRICT NO. 10, PUERCO.

Area, about 6,400 square miles.
Number of ditches listed, 62, as shown on two sheets.
Aggregate capacity, 580 second-feet.
Acres watered, 18,380.

West and southwest of the Jemez Mountains the character of the country changes. Still broken and hilly, its altitude is 2,000 feet or more lower than that of the Jemez, and, as there is but very little snowfall, there are few perennial streams. It is subject, however, to heavy rains, the annual precipitation sometimes coming in a few hours, and the resulting torrents have washed down from the hills and mesas large quantities of earth, which have formed extensive alluvial valleys. While the country slopes from the Continental Divide toward the Rio Grande, a large percentage of it never furnishes water to the river, as the broken surface of the arid land absorbs the whole precipitation.

In district No. 10 I have included the whole area tributary to the Rio Puerco, although but a small per cent of the total area is arable land, and but a small fraction of the latter has a water supply. This

ley. The Puerco the channel of the stream is cut down some
into the ground, but has not yet reached the bottom of the soi
the upper half of the immediate valley of the Puerco the rai
greater than farther south, and this, together with the great ca
of the soil for retaining moisture, enables the farmers to rais
crops of corn, even when they have water for irrigation but a
or six weeks in the spring. These summer rains come sudden
heavily, and the Puerco sometimes changes, in two or three
from a dry, sandy bed to a torrent of 15,000 or 20,000 secon
These floods carry as high as 15 per cent of silt.

The head waters of the Puerco originally formed part of the A
Indian country, and settlements were not made by the Mexican
1872; but then a large body of them moved in at once and all
available water was quickly appropriated.

The only tributary of importance to the Puerco is the San J
Blue Water, which has its source in the Zuni forest, on the
nental divide. It generally receives from this forest consid
water in the spring. After leaving the mountains its valley is
like that of the Puerco, a deep, rich alluvial soil. The Lagu
Acoma Pueblo Indians are the original settlers, the former havi
outlying communities, Ensenada and Pajuate.

A few farms were taken up in 1880 on the Zuni plateau, wh
springs around the base of Mount Taylor north of the San Jos
appropriated at a much earlier date.

I could not learn of but one year's unusual shortage of water
Puerco prior to 1896, viz, 1889. The people there live in a c
state of short water supply. On the San Jose, however, it see
be the impression that there was not so much water availabl
1889 as prior to that year. I therefore assumed that the amo
water returned on the main Puerco for 1894 represented the us
to 1880, except for 1889, when a proper reduction was made a
the district; but prior to 1889 I added 20 per cent to the San J
of water for 1894.

You will notice that ditches Nos. 5 and 6 on the Blue Wa

e enterprise is uncertain. The reservoir will be described further ɔng in this report.

11. DISTRICT NO. 11, SALADO TO BERENDA.

Area, about 5,500 square miles.
Number of ditches listed, 26, shown on one sheet.
Aggregate capacity, 85 second-feet.
Acres watered, 2,550.

All of its drainage area west of the Rio Grande and between the ıerco drainage and the Mexican line is a rough and broken country, ith a scanty water supply. There are a few small streams, however, ıd the area including them I have placed in district No. 11.

Tha first stream met going south is the Salado, which empties into e Rio Grande a short distance below the mouth of the Puerco. hile this stream is a torrent after heavy rains, it is practically dry ne-tenths of the year. In valleys among its hills there are two ıall settlements whose inhabitants eke out a scanty livelihood.

The country for 60 miles to the south of the Salado is without water r irrigation. Then cutting deeply through the Cuchilla Mesa are et several lines of drainage leading from the Black Range to the Rio rande. Only in seasons of excessive snowfall or after heavy rains ɔes the water flow from the hills to the river. But about midway ɔtween the two springs are found in the dry channels and the water om these is led into the long, narrow valleys below. While the water ıpply is scanty, it is constant, and the users have learned to utilize fully, and they raise good crops with an amount of water so small ıat it would mean failure anywhere else in the Territory. The setements all antedate 1880.

The water supply is regular, and the amount estimated for 1894 and 395 is assumed to be the amount used back to 1880, except in 1889, hen a slight reduction is made.

XVIII. RIO GRANDE VALLEYS.

For the purpose of studying the use of water along the main river, have so divided the valley as to place in the same district those porons of it where the conditions as to water supply are somewhat milar.

There are six of these districts, numbered and briefly described as ɔllows:

District No. 12. Espanola Valley; water supply good; cultivation ɔntinuous.

District No. 13. From White Rock Canyon to Albuquerque; water ıpply good at upper end, but sometimes fails at lower end; cultivaɔn nearly continuous.

District No. 14. From Albuquerque to the mouth of the Puerco; ıter supply precarious; cultivation nearly continuous.

District No. 15. From mouth of the Puerco to San Marcial; water ıpply precarious, but helped by summer floods from the Puerco and ıado; cultivation in patches.

District No. 16. From San Marcial to old Fort Seldon; water supply anty, but better than above on account of local drainage; cultivaɔn in patches.

District No. 17. Mesilla Valley; water supply scanty, but usually fficient to mature crops; cultivation continuous.

I will first describe these districts in detail, and then discuss the ıter supply as a whole.

The altitude of the Espanola Valley is about 5,500 feet abo
level, and the climate is such that peaches, apples, and grap
raised. It is surrounded by hills. At its lower end the river
White Rock Cañon. The upper end is watered by ditches
from the main river, but the central and lower portion obtai
supply from streams entering the valley from its sides. These a
Chama and Santa Clara on the west and the Santa Cruz and Poj
on the east. The Chama furnishes water sufficient for some
acres, while the other streams, all of which are small, scantily
about 3,500 acres.

In 1598 Chamita was founded by the Spaniards on the delta
mouth of the Chama. They found three Indian pueblos in th
ley, which they named the San Juan, Santa Clara, and San Ydel
The date of their construction is unknown.

The settlement of Chamita was soon abandoned, but Santa
Plaza was founded in 1609, and it is believed that it has been i
ited continuously by Spaniards and Mexicans ever since, excep
ing the interval between 1680 and 1692.

The water supply of those ditches heading in the Rio Gra
ample, their aggregate capacity being only some 150 second-feet,
the minimum flow recorded during the irrigation season at the E
gauging station, situated at the upper end of the valley, is abo
second-feet, although the record for September, 1889 and 189
little smaller than this amount.

The Chama also furnishes a fair supply of water, although
was a shortage in 1896. This was not of sufficient extent, howe
injure crops.

The land depending upon the other streams for water rece
very scanty supply. The San Ydelfonso Indians get so little
from Pojuaque Creek that they have extended the Hobart ditch)
from the Rio Grande) down to their land, and will use water f
in 1897. There is a large canal projected to leave the river
east side about Embudo and cover all of the land of the valley
the river. Owing to the many diverse interests involved, the

I have made a small reduction from the average use of water to obtain the probable amount used in 1889. Aside from that and from the amount used in 1896, the use is about constant. For all the land watered from the Rio Grande, 4 acre-feet per acre is assumed. For those from the side streams, varying amounts are assumed, fully shown on the detail sheets. The water supply of this district need not be further considered.

2. DISTRICT NO. 13, UPPER ALBUQUERQUE.

Area, about 830 square miles.
Number of ditches listed, 22; shown on one sheet.
Aggregate capacity, 311 second-feet.
Acres watered, 8,070.

On leaving White Rock Cañon about due west of Santa Fe the river enters a long valley of varying width, bounded by the low hills which form the edge of the mesa on either side. That portion of this valley which lies between the mouth of the cañon and Albuquerque I have included in district No. 13, naming it Upper Albuquerque district.

The soil is very fertile, but the land lies low and nearly level and has very poor drainage.

In district No. 13 are four Indian pueblos, viz, Cochiti, Santo Domingo, San Felipe, and Sandia, which all have ancient ditches. The Santa Anas also have two ditches in this district, as mentioned in the description of the Jemez drainage.

The Mexicans, or Spaniards, settled on the vacant land in this district from one hundred to three hundred years ago. While the arable land probably amounts to over 40,000 acres, only about 8,000 is under cultivation. Much of the balance has been tilled at some time in the past; but as the land lies nearly level, and so has little natural drainage, as mentioned above, the lavish use of water has filled it with alkali and much of it has been abandoned, the owners simply moving back onto a little higher ground. I could see nothing, however, to lead me to the belief that the total acreage had raised materially in the past fifteen years.

Before considering the use of water from the main river below White Rock Cañon I will describe the remaining districts and then collate and arrange chronologically all the more important information which I collected concerning the water supply and deduce therefrom a general scheme for estimating the amount of water used since 1880.

3. DISTRICT NO. 14, LOWER ALBUQUERQUE.

Area, about 940 square miles.
Number of ditches listed, 33; shown on two sheets.
Aggregate capacity, 1,168 second-feet.
Acres watered, 17,840.

District No. 14 I have made to cover the valley of the Rio Grande from Albuquerque to the mouth of the Puerco, and have named it the Lower Albuquerque district. The general conditions are about the same as above Albuquerque, although the valley is a little wider there than there. The Isleta Indians are the oldest inhabitants. The Mexicans came in from one hundred to three hundred years ago, and all the settlements long antedate 1880. San Jose ditch No. 2 was built in 1888, but it was the result of a neighborhood quarrel, and covers land previously watered by San Jose No. 1.

supply than does any other portion of the river valley. In m
ten years there has frequently been a shortage as far north as
querque.

4. DISTRICT NO. 15, SOCORRO.

Area, about 800 square miles.
Number of ditches listed, 16, shown on one sheet.
Aggregate capacity, 300 second-feet.
Acres watered, 5,790.

After passing the mouth of the Puerco, the valley of the Rio G becomes narrower and the mesa bluffs higher and more rugged. trict No. 15 I have made to include what valley land there is be the mouth of the Puerco and San Marcial, and have named Socorro district. The occupation of the district as far south as S is quite old, this place having been, I am told, settled about the time as Albuquerque. Below Socorro, however, the settlement i recent, one small ditch having been built as late as 1881.

There is probably not more than 20,000 acres of arable land whole distance of 50 miles from the mouth of the Puerco to San cial, and of this less than 6,000 acres is tilled. The evidenc shrinkage in the area cultivated was here plain, and I therefore to the 1894 acreage 1,200 acres prior to 1880, and enough to m total of 6,000 acres in 1880.

The water supply is precarious, but better than in district N on account of storm waters entering this district from the Puer Salado. These streams are moderately certain to bring in a quantity of mud and water at some season of the year. The la keeping ditches clean is here excessive, and each land owner is as a day's labor per week for each 5 or 6 acres watered

5. DISTRICT NO. 16, RINCON.

Area, about 600 square miles.
Number of ditches listed, 17. (Two of these are abandoned.)
Aggregate capacity, 295 second-feet.

alley widens and four-fifths of the tillage in the district is found in n almost solid body, which is watered by two large ditches, the Colo-ado and Loma Padre.

This country was overrun by the Apaches until about 1860, and no ettlements were made until 1862 or 1863. Then part of the small pper valleys were occupied, and a few years later the lower and larger alley was settled and the Colorado ditch built. About 1884 some eople took up the remaining small valleys. In 1892 a large number f families who had become disheartened by the continued failures f crops in the El Paso and the lower end of the Mesilla valleys left at country and, moving into the bosque above Rincon, took out the oma Padre ditch, irrigating their first crop in 1893. The colony is ow flourishing, having raised a good crop in 1896 from an area of bout 3,600 acres, all of which has been reclaimed from the bosque n the last four years.

The water supply of district No. 16 is rather precarious, but the irri-ators are skillful and crops are raised with a small amount of water.

6. DISTRICT NO. 17, MESILLA VALLEY.

Area, about 150 square miles.
Number of ditches listed, 12 (one of these is abandoned).
Aggregate capacity, 679 second-feet.
Acres watered (1896), 27,100.

The Mesilla Valley extends from Old Fort Seldon to the pass, some miles above El Paso. Together with the El Paso Valley below the ass, it forms the most fertile area along the whole river. The alti-ude of the Mesilla Valley is a little under 4,000 feet. The climate s warm, and fruit of remarkably fine flavor is raised in abundance.

I could not learn, however, that the valley was settled at an early ay. Dona Ana was in existence in 1846, but was then new. It is robable that the Apaches prevented earlier Spanish or Mexican ccupation.

The valley filled up rapidly after 1846. In 1865 some 35,000 acres ere in cultivation. In that year the river made a change of channel, reaking up the ditches, and the acreage decreased somewhat. The ear of 1879 was one of poor water supply. As a result of this, the icacho ditch, watering some 2,500 acres west of the river, about oppo-ite to Las Cruces, was abandoned. A considerable area under the ona Ana ditch was also soon after abandoned, the land watered by decreasing from 7,000 acres in 1882 to 4,600 acres in 1888. All of this ,400 acres still remains idle except some 800 acres, which a man named chiller has colonized and is irrigating with water pumped from wells. his area is not included in my estimate of acreage.

In 1884 a severe flood started another change of channel near the wer end of the valley, and the high waters of 1885 and 1886 com-leted the work. This change of channel cut into several pieces La nion ditch, previously watering some 4,000 acres, and caused the mporary abandonment of nearly all of the land. In 1892 the people ok out a new ditch on the east side of the river, the old one having en on the west side, and are now reclaiming and cultivating their d land.

The changes of acreage since 1880 have been so many in the Mesilla alley that I append to the list of ditches for the district a table owing the probable acreage watered each year since 1880 by the dividual ditches.

XIX. USE OF WATER IN THE RIO GRANDE VALLEYS.

The following is a compilation of the specific information I ha hand concerning the flow of the Rio Grande, with especial refer to summer seasons of abnormally low water:

1851. River dry at Las Cruces for one month.
1861. River dry from Socorro down to and below El Paso.
There was another year between 1861 and 1879 when the river was dry I am not able to locate it.
1879. At Del Norte. High water in main river.
At Los Lunas. River dry two weeks.
At Picacho. River dry; no crop raised.
At Socorro. River dry six weeks.
At San Marcial. River dry six weeks.
At Palomas. River dry six weeks.
At Las Cruces. River dry from the end of July to the end of October.
At La Union. River dry.
At El Paso. River dry.
1880. At Del Norte. Surplus; more than needed for irrigation.
1881. At Del Norte. Surplus; more than needed for irrigation.
1882. At Del Norte. Surplus; more than needed for irrigation.
1883. At Del Norte. Surplus; more than needed for irrigation.
At Palomas. Surplus.
1884. At Del Norte. Largest flood known to residents of the valley.
At Albuquerque. Flood.
At Socorro. Big flood in May.
At Palomas. Big flood in May.
At Las Cruces. Big flood in May.
1885. At Del Norte. More water than needed for irrigation.
At San Marcial. Flood.
At Palomas. Flood.
At Las Cruces. Small flood.
1886. At Del Norte. Heavy snows in valley in 1885–86; surplus.
At San Marcial. Flood.
1887. At Del Norte. Good average flow.
1888. At Del Norte. Good average flow.
At Socorro. Thought to have been dry (?).
1889. At Del Norte. Gauge showed mean flow.
At Embudo. Summer flow about mean flow.
At Las Cruces. River went dry.
At Picacho. River went dry.
At Socorro. River went dry.
At Palomas. River went dry.
At Mesilla. Very dry until late fall.
At El Paso. River was dry from August 5 to the latter part of Decemb longest time recorded.
1890. At Del Norte. Gauge showed mean flow.
At Embudo. Gauge showed large flow.
At Las Lunas. Had water all summer.
At Socorro. Thought to have been dry (?).
At Palomas. A good amount of water.
At Mesilla. All the water needed.
At El Paso. Summer flow large, shown by gaugings.
1891. At Del Norte. Gauge showed mean flow.
At Embudo. Gauge showed largest summer flow recorded.
At Las Lunas. Had water all summer.
At Socorro. Thought to have been dry (?).
At San Marcial. Water all summer.
At Palomas. Dry a short time (?).
At Mesilla. Had all the water needed.
At El Paso. Summer flow very large.
1892. At Del Norte. Summer flow small.
At Embudo. Gauge showed summer flow to be above mean.
At Las Lunas. River was dry July 1 to September 20. No flood i spring.
At Socorro. Thought to have been dry.
At Sorocco. Dry six weeks (?). High water in spring (?).

At San Marcial. River was dry.
At Palomas. River was dry a long time.
At Mesilla. Had all the water needed (?).
At El Paso. Gauge showed dry from early in August until fall.
At Del Norte. Gauge showed summer flow small.
At Embudo. Gauge showed summer flow a little below mean.
At Las Lunas. Had waterable summer, but there was no spring flood.
At Socorro. Had waterable summer.
At Socorro. Dry six weeks (?).
At San Marcial. River dry until September or October (?).
At Palomas. A good deal of storm water, but normal flow small.
At Colorado (above Rincon). Somewhat short of water.
At Mesilla. Said to have been the poorest water supply for six years.
At El Paso. River was probably dry in June, then a flood, and no record beyond that time.

94. At Del Norte. Gauge showed smallest summer flow recorded (smaller than 1896).
At Albuquerque. River was dry during July.
At Las Lunas. River was dry June 24 to August 10.
At Sabinal. River was dry June 22 to July 22.
At Picacho. River was dry one month.
At Socorro. River was dry.
At San Marcial. River was dry June to November. (?)
At Palomas. River was dry a long time.
At Colorado. Short of water.
At Las Cruces. Waterable the season. (?)
At Mesilla. River did not go quite dry.
At Chamberino. Short of water, but fair crop.
At El Paso. No gauge record; river was dry in July.

5. At Del Norte. Gauge showed summer flow a little above the mean.
At Del Norte. Gauge showed summer flow about mean.
At Albuquerque, river was dry through July. (?)
At Las Lunas, had water all summer, but no flood in spring.
At Sabinal. River was not dry.
At Picacho. River was not dry.
At Socorro. River was nearly dry.
At Socorro. River was dry two weeks in June.
At San Marcial. River was dry a few days.
At Palomas. River was not dry.
At Colorado. Good supply of water.
At Las Cruces. River went dry last of June and then the supply was precarious.
At Mesilla. River was dry six weeks.
At Chamberino. Water enough to make a good crop.
At El Paso. No gauge record that can be used.

At Del Norte. Gauge showed summer flow small; said by old residents to be the driest year ever known.
At Embudo. Gauge showed very small flow.
At Pena Blanca. River lowest ever known.
At Albuquerque. River was dry June 20 to September 19.
At Las Lunas. River was dry June 18 to July 20; a small flow July 20 to August 5. Dry August 5 to September 20.
At Sabinal. River went dry June 15, and was still dry October 3; weeds growing clear across the channel.
At Picacho. River went dry June 10, and was still dry October 3.
At San Marcial. River was dry from early June to latter part of August; then there was a little water.
At Mitchell's Ranch. River was dry June 14 to July 6; then very small flow.
At Palomas. River was nearly dry June 1; entirely dry June 15 to September, then up and down. (There is a rock reef across the river near here which forces to the surface the seep water moving in the sands of the river, the minimum flow here is 6 second-feet.)
At Loma Padre. River was dry two weeks in July, but then there was water from rains.
At Colorado. Short of water.
At Las Cruces. River was dry June 10 to July 1, then water in spurts.
At Mesilla. River was dry June 4 to July 21, then precarious.
At San Miguel. River was dry June 1 to July 25; water July 27 to August 4.

At San Miguel. River was dry August 4 to September 1, then water. San Miguel notes are accurate, being taken from a record.)

1896. At Chamberino. River was dry May 27 to August 1; there was wate third of August.

At Chamberino. River was dry September 1 to September 20, then short crop.

At El Paso. Gauge record shows very low water after May 1, and follows: May 26 to July 2, July 7 to July 17, August 23 to Septem and September 7 to September 22. The flow between these date small.

General. Believed in the San Luis Valley that omitting 1896, the dry yea 1884, the flood year, the other years average up, and as much wat comes from the mountains as ever. But owing to the destruct timber both by fire and sawmill men, the snows melt earlier spring and run off more quickly, and so the flood comes soon does not last as long as formerly.

At Embudo: The summer flow since 1889 or 1890 is estimated to be one-half that of former years.

At San Felipe, above Albuquerque. There is always plenty of wa here, but it begins to fail below.

At Albuquerque. Said to have always been a "big river" all st prior to 1884. (?)

At Pena Blanca. Believed to be only one-third as much water formerly.

At Picacho. There was a dry year between 1879 and 1889.

At Palomas. There was a dry year between 1879 and 1889.

At Dona and Las Cruces. The water began to fail in 1884 or 1885. was the summer flow, not spring.)

You will notice many conflicts in this testimony. I have m the more uncertain with a question point. But I thought it b give you all the evidence I have, so you may be able to wei yourself. Of course, the personality of the informants enters la into a consideration of the testimony. I have borne this in mi my study of it.

From this data, supplemented by a personal knowledge c country covering the last seven years, and by a study of the m rainfall records available, I have made up the following allowan water per acre for the different years on irrigated land along the between White Rock Cañon and El Paso:

Prior to 1880. Allow 4 acre-feet per acre. This is to represent an average ordinary years. In 1879 less than this was used.

1880. Allow 4 acre-feet per acre.

1881. Allow 4 acre-feet per acre.

1882. Allow 4 acre-feet per acre to Albuquerque.
Allow 3 acre-feet per acre to San Marcial.
Allow 2.5 acre-feet per acre to La Union.

1883–1886. Allow 4 acre-feet per acre.

1887. Allow 4 acre-feet per acre to Hunnings Ditch at Las Lunas.
Allow 3 acre-feet per acre to La Union.

1888. Allow 4 acre-feet per acre to Albuquerque.
Allow 3 acre-feet per acre to San Marcial.
Allow 2.5 acre-feet per acre to La Union.

1889. Allow 4 acre-feet per acre to Bernalillo.
Allow 3 acre-feet per acre to Albuquerque.
Allow 2.5 acre-feet per acre to Hunnings Ditch (No. 55).
Allow 2 acre-feet per acre to Jarales Ditch (No. 65).
Allow 1.5 acre-feet per acre to mouth of Puerco.
Allow 2 acre-feet per acre to La Union.

1890. Allow 4 acre-feet per acre to San Marcial.
Allow 3 acre-feet per acre to La Union.

1891. Allow 4 acre-feet per acre to San Marcial.
Allow 3 acre-feet per acre to La Union.

1892. Allow 4 acre-feet per acre to Bernalillo.
Allow 3 acre-feet per acre to Hunning's ditch (No. 55).
Allow 2.5 acre-feet per acre to mouth of Puerco.

Allow 3 acre-feet per acre to Socorro.
Allow 2.5 acre-feet per acre to La Union.
893. Allow 4 acre-feet per acre to Lemita ditch (No. 77).
Allow 3 acre-feet per acre to San Marcial.
Allow 2.5 acre-feet per acre to Loma Padre ditch (No. 103).
Allow 2 acre-feet per acre to La Union.
894. Allow 4 acre-feet per acre to Bernalillo.
Allow 3 acre-feet per acre to Hunning's ditch (No. 55).
Allow 2.5 acre-feet per acre to mouth of Puerco.
Allow 3 acre-feet per acre to Socorro.
Allow 2.5 acre-feet per acre to La Union.
895. Allow 4 acre-feet per acre to Hunning's ditch (No. 55).
Allow 3 acre-feet per acre to Colorado ditch (No. 104).
Allow 2.5 acre-feet per acre to La Union.
896. Allow 4 acre-feet per acre to Santo Domingo lower (No. 24).
Allow 3 acre-feet per acre to Bernalillo.
Allow 2.5 acre-feet per acre to Albuquerque.
Allow 2 acre-feet per acre to Hunning's ditch (No. 55).
Allow 1.5 acre-feet per acre to Jarales ditch (No. 65).
Allow 1 acre-foot per acre to mouth of Puerco.
Allow 2.5 acre-feet per acre to Lemitar (No. 77).
Allow 2 acre-feet per acre to Loma Padre (No. 103).
Allow 1.5 acre-feet per acre to lower end district 16 (No. 106).
Allow 2.5 acre-feet per acre for Dona Ana, Las Cruces, and Mesilla.
Allow 2 acre-feet per acre to La Mesa ditch (No. 114).
Allow 1.5 acre-feet per acre to La Union.

In all cases the ditch named is given the amount mentioned as used above it.

You will notice that the evidence concerning flow indicates a dry year between 1879 and 1889. As the rainfall for 1882 was light, I have assumed it to be the year of shortage. It was either 1881 or 1882, and I am inclined to think it was the latter.

From these estimates the detail sheets for districts 12 to 17, inclusive, are filled in for 1894, 1895, and 1896 and the summary for New Mexico for the previous years.

I wish here to call your attention again to the fact that the amount of water I have estimated as used each year is not supposed to be all actually applied to the beneficial irrigation of a growing crop, but it is intended to show the approximate amount diverted by the ditches and lost to the drainage, being either dissipated by evaporation or by transpiration through the growing crops, or held in the soil but not quickly returned to the drainage.

You will notice that the capacity of many of the ditches listed is sufficient to carry many times the amount of water charged to them. For instance, Rio Grande ditch No. 53, named Los Lentes, has a capacity of 40 second-feet or 80 acre-feet per day, while the maximum charged against it is 2,400 acre-feet, or but thirty days' run of its full capacity. In a year of plenty this ditch may carry water for over two hundred days, but a large part of its flow will tail directly into the river or into lower ditch and eventually into the river. Another large part runs across the surface of the ground and so goes back, while only a small portion of the water taken from the river is actually put to a beneficial use.

As before stated, I recognized this condition early in the investigation and so resorted to collecting statistics as to acreage watered, studying at the same time the methods of irrigation employed, with a view of determining a maximum amount of water that it was likely to be used per acre. The result of my study is the assumption of 4 acre-feet per acre.

tant town, and records are in existence over two hundred and
years old which refer to the Acequia Madre of Paso del No
being then in use.

Owing to the limited time at our disposal, and also to the fac
the use of water which had supposedly injured this valley was
course, above it, we did not extend our detailed examination be
Paso. From all I could learn, however, from old inhabitants, I
judge that in former years some 40,000 acres of land were ti
this valley, more than half of which was on the Mexican side
river. This was watered by numerous ditches believed to hav
an aggregate capacity of some 500 second-feet. This valley ha
been noted for the fine quality of its fruit. The mission grap
grows to perfection, while fine peaches are also raised.

At the present time there are five or six ditches on the M
side, with an aggregate capacity of 200 second-feet or more.
United States side there are a larger number of ditches, but all
the El Paso Canal are of small capacity. The El Paso Can
built in 1888, with a claimed capacity of 400 second-feet. In it
ent condition its carrying capacity is not likely to exceed 150 s
feet. I am unable to give you an estimate as to the acreag
cultivated in this valley, but can safely say that it is consid
less than the amount formerly tilled—at least so far as the upp
of the valley is concerned. The water supply has become prec
and many farms have been abandoned, while crops have been
on those still cultivated.

It is in the El Paso Valley that damage to the residents of
is claimed from the diversion of the waters of the Rio Grande
United States. While, for reasons which I will state farther
this report, I believe that this claim is well founded, I can no
you even an approximate estimate of the amount of damage
nor do I consider it to be within the scope of this paper to take
subject. I will say, however, that the citizens of the United State
have suffered to the same extent as their Mexican neighbors an
the loss to both has been much greater than it has been to the

N. Mex., and El Paso, Tex., and a record of the height of water in the river at each place has been kept for a portion of the time since, while attempts have been made to obtain records at other points on the main river, but so far without any trustworthy results.

On four sheets of the tables (see table of contents for the numbers thereof) I have arranged the records of these three stations and also that of another station established in 1895 at the upper end of White Rock Cañon and named Rio Grande. It is an important station, although the record is now too short to be of much value.

In tabulating these records I have divided them into two portions, which I have called, respectively, summer and winter flow, the first covering April to September and the second October to March. While the irrigation season in the San Luis begins after the middle of April and ends early in September, and while lower down the river it begins much earlier and ends later, I thought that the above division would fit all the conditions fairly well, and it would be safe to assume that the summer flow was all available for irrigation except in time of flood, when much must necessarily run to waste, but that the winter flow was all, or nearly all, unavailable and unused for irrigation.

In order that the record of a gauging station may be of value, the cross section of the station should be moderately permanent, not changing by scouring out in sudden rises and filling up on a falling river, the channel of the river must be straight for some distance above the station, and enough actual meter gaugings of the stream must be had, taken at the various stages between extreme high and low water, to render it possible to make a rating table showing the amount of water corresponding to a given reading on the gauge. As the cross section, unless in solid rock, will be subject to change, a new rating table must be made from time to time.

1. GAUGING STATION AT DEL NORTE, COLO.

The Del Norte gauging station is located some 3 miles above the town of Del Norte and is above the head-gates of all the large canals. It is said to be a good station, the cross section being quite permanent and the channel straight, so that the flow of water through the station is uniform. A large number of gaugings were made here in 1889 and 1890, and the records for those years are reliable. But one gauging was made in 1891, one in 1892, and none in 1893, while in 1894 but two were made, both in a small river. The records for these years are therefore not trustworthy as far as deduced actual flow is concerned. The Thirteenth Annual Report of the Survey gives, on page 14 of Part III, the flow up to and including 1892 and computes the annual run-off, both to an exactness hardly justified by the conditions. For 1893, 1894, and 1895 the survey publishes gauge readings only, and these, as well as the record for 1896 up to October 1, I have reduced to second-feet of flow and acre-feet of run-off by an approximate rating table which I made up from the few gaugings made since 1892 of which I have a record. This rating table and the gaugings on which it is based is given in the tables.

It is likely that the run-off shown in the table is, taken as a whole, within 20 per cent of the actual amount which has passed Del Norte since October, 1889, and possibly within 10 per cent.

You will notice that the summer flow largely exceeds the winter flow, but that the latter is much more constant than the former, and that the summer flow varies from a minimum of 330,000 acre-feet,

but I should judge that the current must then vary greatly i
ent portions of the cross section. The record is not comp
gauge readings having been taken for a greater portion
Numerous gaugings were made here in 1889 and 1890, and also
and 1896. These show some change between the two sets
ings, but not an excessive amount; and it is likely that the to
p. 86) for this station are within 20 per cent of actual amoun
ing it.

You will notice a greater variation in the summer flow of th
ent years here than at Del Norte, the minimum recorded bei
of 1896, when 275,000 acre-feet passed, although 1894 probabl
have shown a smaller total flow, while the maximum is for 189
over 1,000,000 acre-feet is supposed to have passed.

3. GAUGING STATION AT RIO GRANDE, N. MEX.

The Rio Grande station, situated in the upper end of Whi
Cañon, is said to be the best station on the river. I have nev
it. This will become an important station if the water right
river below the cañon are ever adjudicated, as it will form t
for distributing the water of the river the same as Del Norte n
for district No. 20, of Colorado. The rating table used for this
is approximate only. It is based on some ten or twelve g
which cover the range of the river from high to low water. Th
all been made by Mr. P. E. Harroun, of Santa Fe, who establis
station.

You will notice that the record for summer flow is here som
cent more than at Embudo, only 35 miles above it. This a
is supposed to come from the streams entering the Espanola
of which the Chama delivers the major portion of the water, b
be partly due to errors in the two rating tables, the Embu

the gauging station was established this dam was raised about t, so changing the readings on the gauge.

e cross section at the station was such, being alluvial deposit, it was subject to constant change, and only by a series of systic measurements, carried through each rise and fall of the river, l a rating table be made up and corrected for each change of cross on which would give a volume of flow approximating at all closely e water actually passing the station. This was done for 1889, I think for a portion at least of 1890, and the records for those years are reliable.

it while the gauging station was abandoned some time in 1890, so s taking meter measurements was concerned, the readings on gauge were still recorded, and the Thirteenth Annual Report, re referred to, gives, on page 94 of Part III, the flow in second-for this station for each month between 1890 and the dry river 92, carried to a degree of precision hardly justified by the conns obtaining at the station. In a bulletin issued to cover the ; of the hydrographers for 1893 and 1894, gauge readings are pubd for this station, and also a rating table, which is based, I sup-, on the meter gaugings of 1889 and 1890. While in the absence y other information I have reduced the gauge readings by this g table, I do not think that the results are at all reliable, and should be borne in mind in any study of them. As the change, ver, occurring most quickly is a sudden scour caused by a rising ', when much more water will pass the station than the gauge ing would indicate, it is likely that fully as much water passed tation as is indicated by the gauge readings except in time of water. At that time the raising of the Mexican dam in 1891 is y to so affect the gauge readings as to make them indicate more r passing than was actually doing so. As a mistake, however, ,000 second-feet in a flood for a day would balance one of 100 d-feet in low water for ten days (the flood being underestimated the low-water flood overestimated), it is still likely that the runiven in the table on page 86 is under rather than over the true nt.

is station was abandoned in June, 1893, and no attempt at a recvas made until January, 1895, when a new station was established e pumphouse belonging to the smelter some 3 miles above El . This moved the gauge about a mile upstream, thus removing m the immediate neighborhood of the Mexican dam, but in other cts the choice of location was an unfortunate one. A rock point into the river on the east side, against which the water strikes rebounds, forming cross currents and eddies. There is a large in the middle of the channel just above the gauging station. water pours over this in high water, but runs around it in low r. As a result the bottom of the gauging cross section scours out fills up with great rapidity and through a large range of depth, a rence of 14 feet of water having been observed with only a differ-8 feet on the gauge.

hile this station was established nearly two years ago, but ten or ve meter measurements have been made, all but one being durlow water. The largest measured flow is about 1,000 second-feet ore. During October, 1896, a sudden flood came down the river. le Ibarrola took daily measurements of it, and these showed that maximum was reached on October 19, when 5,900 second-feet was ing, there being 4,000 the preceding day. The readings on the

gauge, however, showed an average of the same height for the two days and an extreme range between the two days of only 0.4 foot. So that I have not been able to make any reliable estimate of the flow through this station for 1895 and 1896, hence the table stops with 1893.

The records of these stations are here consolidated for convenience in comparison, all in acre-feet, to nearest thousand:

Time.	Del Norte.	Embudo.	Rio Grande.	El Paso.
May to September, 1889 (5 months)				366,000
April to September, 1889 (6 months)		578,000		
Winter, 1889–90	163,000	173,000		59,000
Summer, 1890	706,000	860,000		863,000
Winter, 1890–91	306,000	239,000		243,000
Summer, 1891	714,000	1,046,000		1,621,000
Winter, 1891–92	151,000	315,000		228,000
Summer, 1892	444,000	725,000		847,000
Winter, 1892–93	296,000	147,000		29,000
Summer, 1893	453,000	494,000		320,000
Winter, 1893–94	293,000	168,000		
Summer, 1894	332,000			
Winter, 1894–95	207,000	178,000		
Summer, 1895	545,000	687,000	1,113,000	
Winter, 1895–96	329,000	223,000	316,000	
Summer, 1896	369,000	275,000	488,000	

XXII. SUGGESTIONS.

This places before you the data available on which to base an answer to the two questions raised by Mr. Romero and Mr. Olney, and I will now give you my suggestions thereon, in accordance with your instructions:

First. Taking up the consideration of the summary for New Mexico, you will notice the following: Prior to 1880 there were 183,000 acres watered by 553 ditches, having a total capacity of 5,600 second-feet. While the number of ditches increased to 573, adding, however, 50 second-feet to the capacity, this area slowly decreased to 180,000 acres watered in 1884. Then it suddenly fell to 173,000 acres in 1885, this fall being due to three ditches, with an aggregate capacity of 130 second-feet, being washed out and entirely abandoned, while others were badly injured by the great flood of 1884. The area cultivated remained practically constant until 1889, although some 18 new ditches, with an aggregate capacity of 120 second-feet, were built in the interim. In 1890 the acreage commenced to increase, and in 1895 it reached a total of 187,000 acres, the same amount being watered in 1896. It is likely that a slightly increased area will be watered in 1897.

The total number of ditches in use in 1896 was 603, with an aggregate carrying capacity of 6,060 second-feet, or an increase over 1879 of 50 ditches carrying 450 second-feet of water. These tables show, however, that while the number and aggregate capacity of the New Mexico ditches has increased nearly 10 per cent since 1879, the acreage has increased but 2 per cent since that year, falling in the interval between 1879 and 1896 to a minimum area, which was nearly 6 per cent below that of 1879.

An examination of the detail sheets for New Mexico districts will disclose the fact that a large percentage of the irrigation is ancient. Over 75 per cent of it dates back to 1860, while 20 or 30 per cent is of unknown age, but over 100 years old. The different tribes of Pueblo Indians now cultivate about 20,000 acres in the Rio Grande drainage.

In view of these statistics, I would suggest that the injury claimed

to have been done to the El Paso Valley by recent diversions of the waters of the Rio Grande has not come from an increased use of water in New Mexico.

Second. Taking up the consideration of the summary for Colorado and referring also to the detail sheets of each district, you will observe the following:

The earliest settlement in the San Luis Valley, judging from the date of the decree, was made in 1852. In 1870 the settlements had increased until there were some 147 ditches in use, with an aggregate capacity of about 1,300 second-feet, and these watered 50,000 acres of land.

In 1879 the use of water had there extended to the irrigation of 122,000 acres, served by 571 ditches, with a probable aggregate capacity of 3,500 second-feet and which were afterwards granted decrees which amounted to 3,700 second-feet.

This area, together with the number of ditches and the total carrying capacity thereof, increased steadily up to 1890, when ditch construction stopped, although some were afterwards enlarged. Then the total number of ditches had reached 925, with a capacity of about 1,500 second-feet (afterwards increased to about 10,000 second-feet) and decrees amounting to 11,700 second-feet. In 1890 these ditches served over 300,000 acres, the acreage having increased at a moderately uniform rate from 1879. The next two years saw a large increase, over 350,000 acres being watered in 1891 and nearly 400,000 in 1892. The latter was the year of maximum acreage, the amount falling back to 350,000 acres in 1893 and 340,000 acres in 1894. In 1896 there were 825 ditches in use, with a total capacity of 10,000 second-feet or more, 377 of these having decrees aggregating over 12,200 second-feet, and they served 320,000 acres of land. The short water supply of 1896 cut down the area watered in 1896, so that the area of 1894 (viz, 340,000), which was also the area of 1895, is probably the normal amount for the valley. It is likely to become greater rather than less from year to year, although no new ditches will be built, nor will there be any great increase of acreage served directly with water, because all of the supply available for direct irrigation is now in use. The construction of reservoirs, a subject taken up later on, may some time add water enough to the direct supply to serve some 30,000 acres, and that amount may in the future be added to the area now tilled.

These totals show a permanent increase of about 220,000 acres over 1879, or an increase of nearly 200 per cent in the area under cultivation, and nearly that increase in the use of water in Colorado since 1879. This result is deduced in acres of land rather than in acre-feet of water, because the amount of water varies so greatly in different years on the same area of land that it is misleading to quote acre-feet without an accompanying study of the special conditions obtaining the year when the amount quoted was used. Later on I will analyze more fully the effect of this increased use of water. Here I would suggest that this general proposition is established by a study of the Colorado statistics, viz:

The El Paso Valley, as well as the valleys on the river, as far north in New Mexico as Albuquerque, have suffered from the increased use of water in Colorado.

Third. Taking up the consideration of the flow of the river, before and since the construction of the Colorado ditches.

There are no gauge records of flow which antedate the end of the construction period in Colorado. Reference to Section XIX will show

than ever before, the flow, which had been small all winter, c
May 26; but the copious summer rains on the New Mexico dr
of the river sent down water in July, and its flow was intern
after that date.

C. That floods are not so frequent as in former years, t
destructive one occurring in 1884. There was a small one i
but it was not so large as was that of 1884.

There are so many different climatic conditions obtaining
various sections of so large an area as the one under consid
that it is difficult to draw general conclusions from a study o
conditions. In 1889, for instance, the records show a large vol
water in the river at Del Norte and the channel dry from Albuq
southward, while in 1894, with a very small amount in the river
San Luis, it did not go dry at Albuquerque, but was dry thirt
for a long distance below there, and was not dry for any len
time in the Mesilla Valley. The absence of the usual summe
in New Mexico accounts for the condition of 1889, while hea
cipitation in the southern country accounts for that of 1894.
these explanations are satisfactory, the conditions in these tw
show that it is impossible to foretell the condition of the rive
Paso from the Colorado snowfall and the subsequent spring an
mer flow at Del Norte.

Another condition which probably affects the time, duratio
volume of the spring run-off from the mountain country is as f
In the past ten or fifteen years there have been large areas of
destroyed on the head waters of the Rio Grande either by fir
the ax of the lumberman. It is commonly believed that this
ing of the hills causes the snow to melt much more rapidly
spring than it did when protected by the timber, so that it
quickly leaves the mountains instead of being held back un
summer when it is needed for irrigation. Not only is this tr
it is quite likely, as suggested by Colonel Mills, that what
called the dry evaporation of snow from these bare hillsides is

ate spring, are now, falling as they do on the barren hillsides which ıave been denuded of their timber, largely evaporated and dissipated n the air long before the warm days of spring come. From this it is ısy to infer the necessity of conserving what forest areas still remain n the mountains.

On the foregoing I would base the suggestion that the dry rivers at l Paso are not always caused by the increased use of water in the Jnited States, but that this use has increased the frequency of recurence thereof and the lengths of their duration, as will appear more ully from the following discussion. Before entering upon that disussion, however, I would also suggest: So many different and varyng conditions simultaneously affect the flow of the Rio Grande that t is difficult to say just what change in this flow is due to a radical nd permanent change in one of these conditions, the others still contantly changing as before.

Fourth. Taking up a detailed consideration of the effect on the iver of the Colorado use of water. The conditions we have to conider are: A long river flowing sluggishly through a wide and sandy ed, with a minimum flow at the lower end of the stretch under conderation but little, if any, more than sufficient in years of ordinary w water to supply the demands thereof, and it is asked what effect ill doubling the amount of water used on its head waters have on its wer reaches, the irrigation on its head being already some two-fifths the total of the river. The answer must be that the minimum flow wer down will be decreased. The question may be considered more detail as follows:

In studying the effect on the Rio Grande of diverting its waters in e San Luis Valley, only those areas should be considered which are igated by water taken from those streams whose flow enters the in river. This condition segregates all of districts 25, 26, and 27, d should also reject a small percentage of districts 20 and 21. But e area that would be rejected in the latter districts is small and uld not materially affect totals. Therefore, in the following disssion all land watered in the valley will be considered except that districts 25, 26, and 27.

While much more water will be used in a year of plenty than in one scarcity, it is the effect on the river of the use of water when the pply is short that we wish to obtain, and so our attention should be ected to the use of water in those years alone. The seasons of 1894 d 1896 shows the shortest water supply of any years of which we e a reliable record in the San Luis, and I think it will be a fair sideration of the problem to confine our computations to those two ars, and to obtain, if possible, an estimate of the amount of water erted from the river during these two years in excess of what would e been used if the same area had been watered in 1894 and 1896 it was irrigated prior to 1880.

Deducting from the totals for prior to 1880, 1894, and 1896 the area d water charged to districts 25, 26, and 27 there remains:

Year.	Acres.	Acre-feet.
r to 1880	69,775	240,100
	272,865	526,265
	248,760	418,270

This 264,000 acre-feet equals about 1,300 second-feet flow hundred days. This is about the length of time the irrigation lasts in the San Luis Valley. Hence, making all due allowa water charged twice, seepage return, both present and pros the probable overestimate of acreage made by owners who wi ditches to make a good showing, and the errors in guessing amount of water flowing in the different ditches by men whose of a cubic foot of water are pretty hazy, and who are almost overestimate a stream, it is safe to say that the low-water flo Rio Grande in dry years has been decreased by the new irrig the San Luis an amount equal to at least 1,000 second-feet o flowing for one hundred days, and as the probable future returns is likely to be nearly or quite all offset by increased that the river has permanently lost this amount of water.

As the evaporation and percolation in the river's channel wil practically constant from year to year from Colorado to Tex vided, there is any water in it at all, and as the use of water Mexico, when any is to be had, is about constant also, this taki second-feet from the river in Colorado means taking practica much from the flow at El Paso. And as the San Luis season some time in the latter part of April, while the largest use of in May and June, and as it probably takes water twenty to thi to travel from there to El Paso, it is seen that the San Luis m diversion of water in May or June would most greatly affect t at El Paso in June or July, months when the water supply is begin to fail. The July use of water in the San Luis, which large, would be felt at El Paso in August.

While this discussion indicates that the mean summer flo Paso has probably been decreased 1,000 second-feet at least, haps more, by the increased use of water in Colorado, it does n that were no more water diverted in Colorado than was used 1880 1,000 second-feet would be running in the river at El Pa it is now dry, because it might go dry without any water bei in Colorado, as it did in 1851 and 1861. It means that the

l Paso before that date? The answer is: The years of 1883, 1884, 1885, nd 1886 were all years of heavy snowfall in Colorado, and, so far as I now, of average summer rainfall lower down the river, so that there as a large amount of surplus water. And while the acreage has argely decreased since 1892 in the San Luis, the snowfall has been canty for three years past, and the water supply is short, so that no eneficial effect resulting from this decreased acreage has been felt at l Paso. If the coming years bring more snow, the area watered in he San Luis will probably increase again, as it is now limited by the ater supply being exhausted, and not by there being no more availble land.

The condition, therefore, to be considered at El Paso is that of a ry river likely to recur every year. The suggestions I would make, hich are based on this discussion, are already formulated and preented in their proper places.

Before considering the remedy for this condition, I will give you ata as to storage project, completed, proposed, or probable, in the ainage above El Paso.

XXIII. RESERVOIRS.

On the last sheet of the tabulated matter I have listed 4 reservoirs, nstructed in the Rio Grande drainage, with an aggregate capacity 31,300 acre-feet; 4 projected, with an aggregate capacity of about),000 acre-feet, and 6 possible sites, with an aggregate capacity of out 430,000 acre-feet. This I will consider in detail further on.

n the winter of 1889–90 I was employed by the United States Geoical Survey to reconnoiter and report on all the possible reservoir s in the drainage of the Rio Grande, so that the public lands lying hin their limits might be withdrawn from sale. My instructions e to report all possible sites without regard to the water supply, d available for irrigation, or cost per acre-foot of water stored. der these instructions I reconnoitered and reported 52 sites, includ- the El Paso site, with an aggregate estimated capacity of over)0,000 acre-feet, or about 1,500,000 acre-feet aside from the El Paso . A number of these have since been platted on the General Land ice map of New Mexico and shown on the published copies thereof Government reservoir sites.

ut one of the number has been improved. This is the one on the d of the Blue Water in the Puerco drainage, No. 33 on the General d Office map.

Vhile these sites exist as reported by me to the Geological Survey, l it is physically possible to make a reservoir of each one, the erse conditions surrounding nearly all either as to scanty water ply, no available land on which to use the water, probable excess cost of site, or of the necessary dam, are such as to preclude all bability of their construction. Specific statement of the reasons ling me to this conclusion in the case of each site condemned ld be beyond the scope of this report.

uite a large number of reservoir filings have been made on sites l to exist around the San Luis Valley. Being familiar with the litions under which nearly all of these filings were made, I have onfidence in their being built, and so have listed none of those filed s "projected," except Santa Maria lakes, although two are ided under possible sites.

more than a third of this amount, so that the reservoir sh
charged with a probable draft on the drainage of not over 4,0
feet.

3. Santa Fe.—This is built above Santa Fe. The water it in
would otherwise be used for irrigation, as the stream has
many years delivered any water to the river, except in time
This reservoir serves as an equalizer, distributing the use
more uniformly throughout the year. Its capacity is 4,000 a
It can be omitted from the discussion.

4. Blue Water.—This is a Government reservoir site No. 3
built on Blue Water Creek, in the Zuni Mountains, to a ca
20,000 acre-feet. It can be made to hold 70,000 acre-feet, but t
supply is uncertain. It stores no water that would ever reach
Grande, and so may be omitted from the discussion.

B. RESERVOIRS PROJECTED WITH A FAIR PROSPECT OF CONSTRUC

1. Santa Maria Lakes.—This site is in district 20, Colorado,
head waters of the Rio Grande. If utilized, it will furnish
one of the large canals in the San Luis Valley. All of its ca
20,000 acre-feet would be drawn from water which would o
flow down the river.

2. Mormon.—This site is in district 22. It may never be b
I thought it possible that it might be, and so listed it.
capacity of 20,000 acre-feet would be drawn from water whic
otherwise flow down the Conejos.

3. Western Homestead Land and Investment Company'
voir.—This site lies northwest of Albuquerque and would
from the flood waters of the Puerco. While it would draw
from the sudden summer floods of this river, much of whi
would otherwise sink away into the sand, it must be consi

C. RESERVOIR SITES WHICH MAY BE IMPROVED AT SOME FUTURE TIME.

1. *La Jara Meadows.*—This site lies on the head of La Jara Creek, district No. 21, Colorado. This is a fine site, with large capacity, t the water supply is not abundant, as the tributary drainage area s an extent of only some 40 or 50 square miles and is not likely to rnish over 20,000 acre-feet. This amount is assumed as the capac-. The site is now occupied by hay ranches. All the water stored ould otherwise flow down La Jara Creek, but much of it would sink ray into the La Jara artesian basin. Assume that one-half of the ove amount, or 10,000 acre-feet, may some time be stored here, which ould otherwise reach the main river.

2. *Elk Creek Meadows.*—This site is on a tributary of the Conejos iver, in district 22, Colorado. It, together with one on Pinos Creek, re now filed on by some parties who are using them for fishing pur-ses with no intention of utilizing them for storage reservoirs. Its hole capacity of 8,000 acre-feet would form a draft on the surplus aters of the Conejos.

3. *Pinos Creek Meadows.*—This site is on a tributary of San Anto-o River, in district 22, Colorado. Its capacity is 5,000 acre-feet, hich would form a draft on the surplus waters of the San Antonio.

4. *Brazos Lakes.*—This site is on the head of the South Fork of the azos River, in the Chama drainage on the New Mexico land grant Tierra Amarilla. If ever improved, it will be for the purpose of ring water to be used on the mesa around Parkview. Its whole pply will be taken from the surplus waters of the Chama drainage. e total capacity could be made 50,000 acre-feet, but the available ter supply is not likely to exceed 20,000 acre-feet, and this amount ist be considered.

5. *Hot Springs.*—This is Government reservoir site No. 37 and is a e site, but with a water supply which must come from rains rather an from snow, and is, therefore, uncertain. It is near the head of amoso Creek, in district 11, New Mexico. This stream is one of se which cut down into the Cuchilla Negra Mesa. Practically its ole supply would be taken from the surplus waters of the Rio ande. Its maximum capacity is 36,000 acre-feet, but its drainage a is not likely to furnish over 20,000 acre-feet. This amount must considered as a possible draft on the waters of the Rio Grande.

6. *Old Fort Craig.*—This is Government site No. 38, and lies on the Grande west of the Jornado del Muerto and some 35 miles above Elephant Buttes site. With an 80-foot dam I estimated its capac-to be 360,000 acre-feet. This would, of course, all be drawn m the surplus waters of the river. It is not likely that both this l the Elephant Buttes reservoir would ever be built, as either will re a supply of water amply sufficient to serve all the available land. This list comprises all the sites which I think are likely to be occu-d. Those outside of the main valley of the river which will im-nd water that would otherwise enter the Rio Grande will, if built, hhold from it an aggregate of 127,000 acre-feet.

XXIV. WATER SUPPLY FOR EL PASO RESERVOIR.

n accordance with your letter of instructions, in which you request n me any suggestions that may occur to me bearing on the prob-under consideration, I add the following discussion of the proba-water supply for the El Paso reservoir:

mate to have been in error. The longest time that water wo
to be stored, unless carried over from one year to the f
would be four to six months. So that, even if the daily eva
were as great from the lake as from the pan, the total loss b
the stored water would only equal half the annual evaporat
it is not at all likely that the rate of evaporation from the
exceed one-half that from the pan, an allowance of 3 feet
whole surface for the loss from evaporation during the tin
water is held, is probably ample, or 75,000 acre-feet might b

The first time the reservoir was filled the seepage would
as stated in my former report; but after the first or second f
from this source would become so small as to be safely ignor

An available supply must therefore be in sight of 190,000
of water for the service of land and 75,000 acre-feet for evapo
265,000 acre-feet in all, and must be likely to remain in sight
safe the water supply of this reservoir. In my report to C
Mills, made in 1889, I estimated the capacity of this lake to b
acre-feet. Hence, remembering that evaporation would be g
the longer time that stored water would have to be held, yo
that until sediment filled a portion of it the reservoir will h
cient water to supply the demand on it for about two yea
filling will occur, however, and hence reliance can not be safe
on this storage capacity, but water enough ought to be in s
twelve months for the necessities of the coming twelve, le
extra storage room as an element of safety.

Recurring to the meager records of the flow at El Paso (s
you will see that the flow for the eleven months prior to Marc
(this time including the long drought of 1889), was 425,000
for the year ending March 31, 1891, it was 1,100,000 acre-fee
year ending March 31, 1892, it was 1,850,000 acre-feet; for
ending March 31, 1893, it was 875,000 acre-feet.

April, 1889, was, I think, a month of heavy flow, being nea
quite, as large as was May, when 190,000 acre-feet passed
Assuming that 150,000 acre-feet passed in April, the flow fo

o the summer of 1895, so that either 1890, 1894, or 1896 must be year of minimum flow here.

udging from the looks of the gauge readings for the two years prior October, 1896, all efforts to reduce them to any definite quantity ing been futile, I should judge that the flow for the year ending ch 31, 1896, was something like 700,000 or 800,000 acre-feet, rly all of this passing during the first three months of the time uded, while I should estimate that 200,000 acre-feet or more had ed in the seven months prior to October 31, 1896. There was tically no flood in the spring of 1896. This accounts for the small given. If the same conditions should prevail for the coming five ths, the annual flow may not exceed 300,000 acre-feet. Heavy 's are already falling in Colorado, however, and there is every n to expect a good flow in the river next spring. The conditions ow, in my opinion, at their worst, and can change but to mend. e this minimum flow may last for the balance of the year, it is ikely.

herefore think it safe to say that at least 400,000 acre-feet of surwater is likely to be in the drainage of the Rio Grande some time g every year, and would pass El Paso if no drafts for storage made on it.

ference to the closing paragraph of the discussion of reservoir shows a possible future draft on this surplus water from the use servoir sites outside of the valley of the Rio Grande of 127,000 feet, while either the Fort Craig or the Elephant Buttes reservoir till to be considered. This will leave about 275,000 acre-feet able, provided neither of the latter reservoirs are built, for the so reservoir, in what may be termed a mean year of minimum with a possibility of its falling to 200,000 acre-feet in an excess- low year. Unless two consecutive years are excessively dry, ver, dependence may be placed for many years on the extra e capacity of the reservoir.

that a minimum annual flow of even less than 300,000 acre-feet, all of the reservoirs mentioned built, except the Elephant Buttes 'ort Craig, would not mean a loss of crops in the El Paso Valley. ould therefore suggest that the water supply is likely to be suft for the El Paso reservoir, provided no large storage reser- are constructed above it on the main river, but without any ctions of probable reservoirs on the tributaries.

XXV. CONCLUSION.

several times before stated, the statistics on which the assump- and inferences deduced in this paper rest are approximate only. probable error ranges from 10 to 20 per cent for areas watered, 10 to 30 per cent for amount of water used, and from 10 to 30 nt or more for the flow of the Rio Grande, the largest error in st-named case relating to flood discharge, when for our present se an error is of little importance.

withstanding this large possible element of error in the prem- think it safe to say that the suggestions I have made and the ns I have expressed, either directly or by implication, are well rted by the evidence, are safely conservative, and are the most ble ones to be derived from a careful study of all the informa- t hand. Their recapitulation is as follows:

4. It is impossible to state specifically how much water was
river prior to this increased use of water and since, as the reco
not antedate this increased use, and as the flow since the records
varies within very wide limits.

5. This flow of 1,000 second-feet, if allowed to remain in the
would do much toward preventing a dry river at El Paso, hence

6. The Mexican and American citizens of the El Paso Valley
suffered in common with their neighbors of the Mesilla Valle
those still farther up the river by this Colorado increased
water. The suffering has been greater in the El Paso Valley
elsewhere.

7. All of the summer flow of the streams in the San Luis V
except their flood waters, are now appropriated, and therefore t
of water therein for direct irrigation is not likely to materially in
in the future.

8. Storage reservoirs may be built outside of the main valley
river, with an aggregate capacity of about 125,000 acre-feet.
some 230,000 acre-feet capacity is projected in the river's valley
El Paso.

9. There are some 95,000 acres of arable land in the El Paso V
about equally divided between the United States and Mexico
supply a reservoir with water sufficient for the irrigation of this
together with the amount that will be evaporated from the surf
the reservoir, will require about 265,000 acre-feet of water each

10. While there is a possibility of a year's flow past El Paso
below 300,000 acre-feet before deducting the amount that c
stored above there, outside of the river's valley, the likelihood i
it will never ordinarily go below 400,000 acre-feet in a dry yea
from the latter amount is taken the 125,000 acre-feet which c
stored outside of the river's valley, there remains 275,000 acr
available for the El Paso reservoir. Hence,

11. The water supply is likely to be sufficient for the El Paso
voir after deductions are made for all the probable storage sc
except that one above the Mesilla Valley. But,

Winter flow of the Rio Grande at Del Norte, Colo.

[From Geological Survey records. Area contributing run-off, 1,400 square miles.]

Month.	1889-90.		1890-91.		1891-92.		1892-93.	
	Second-feet.	Acre-feet.	Second-feet.	Acre-feet.	Second-feet.	Acre-feet.	Second-feet.	Acre-feet.
October	280	17,360	470	29,140	845	52,390	260	16,120
November	320	19,200	480	28,800	375	22,500	360	21,600
December	280	17,360	565	35,030	325	20,150	920	57,040
January	550	34,100	990	61,380	*300	18,600	1,170	72,540
February	795	44,520	1,295	72,520	*300	17,400	*1,200	67,200
March	485	30,070	1,280	79,360	315	19,530	*1,000	62,000
Total		162,610		306,230		150,570		296,500

Month.	1893-94.		1894-95.		1895-96.	
	Second-feet.	Acre-feet.	Second-feet.	Acre-feet.	Second-feet.	Acre-feet.
October	300	18,600	345	21,390	420	26,040
November	340	20,400	270	16,200	325	19,500
December	795	49,290	360	22,330	945	58,590
January	1,210	75,020	845	52,390	1,370	84,940
February	1,200	67,200	970	54,320	1,230	71,140
March	1,015	62,930	650	40,300	1,115	69,130
Total		293,440		206,930		329,340

* Estimated.

Summer flow of the Rio Grande at Del Norte, Colo.

[From Geological Survey records.]

Month.	1890.		1891.		1892.		1893.	
	Second-feet.	Acre-feet.	Second-feet.	Acre-feet.	Second-feet.	Acre-feet.	Second-feet.	Acre-feet.
April	910	54,600	1,410	84,600	1,045	62,700	690	41,400
May	4,330	266,460	3,285	202,070	2,605	161,510	2,950	182,900
June	3,805	228,300	4,145	248,700	2,185	131,100	2,525	151,500
July	1,515	93,930	1,690	104,780	740	45,880	520	32,240
August	610	37,820	665	41,230	445	27,590	410	25,420
September	385	23,100	525	31,500	260	15,600	325	19,500
Total		706,210		714,480		444,380		452,960

Month.	1894.		1895.		1896.	
	Second-feet.	Acre-feet.	Second-feet.	Acre-feet.	Second-feet.	Acre-feet.
April	860	51,600	2,115	126,900	1,535	92,100
May	2,510	155,620	2,195	136,090	2,575	159,650
June	980	58,800	2,490	149,400	800	48,000
July	355	22,010	980	60,760	385	23,870
August	380	23,560	725	44,950	260	16,120
September	345	20,600	450	27,000	480	28,800
Total		332,190		545,100		368,540

ting table by which the above table for 1893, 1894, 1895, 1896 was computed in second-feet.

[Actual gaugings in black-face figures.]

Feet.	.0	.1	.2	.3	.4	.5	.6	.7	.8	.9
1	150	165	185	210	235	**260**	300	350	415	**490**
2	550	610	670	730	790	850	910	**970**	1,040	1,120
3	1,210	1,310	1,420	1,545	1,685	1,840	2,010	2,195	2,395	2,600
4	**2,820**	3,060	3,320	3,600	3,900	4,220	4,560	4,920	5,300	5,700

Winter flow of the Rio Grande at Embudo, N. Mex.

[From Geological Survey records. Area contributing run-off, 7,000 square miles.]

Month.	1888–89.		1889–90.		1890–91.		1891–92.	
	Second-feet.	Acre-feet.	Second-feet.	Acre-feet.	Second-feet.	Acre-feet.	Second-feet.	A f
October			280	17,360	560	34,720	1,080	1
November			365	21,900	615	36,900	775	
December			540	33,480	645	39,990	550	
January	430	26,660	435	26,970	585	36,270	495	
February	475	26,600	555	31,080	615	34,440	595	
March	785	48,670	680	42,160	915	56,730	1,050	
Total		*101,930		172,950		239,050		3

Month.	1892–93.		1893–94.		1894–95.		1895–96.	
	Second-feet.	Acre-feet.	Second-feet.	Acre-feet.	Second-feet.	Acre-feet.	Second-feet.	A f
October	200	12,400	485	30,070	†380	23,560	495	
November	315	18,900	†450	27,000	†400	24,000	610	
December	325	20,150	445	27,590	†430	26,660	530	
January	450	27,900	435	26,970	480	29,760	535	
February	535	29,960	450	25,200	490	27,440	545	
March	605	37,510	†500	31,000	760	47,120	955	
Total		146,820		167,830		178,540		

* Three months. † Estimated.

Summer flow of the Rio Grande at Embudo, N. Mex.

[From Geological Survey records.]

Month.	1889.		1890.		1891.		1892.
	Second-feet.	Acre-feet.	Second-feet.	Acre-feet.	Second-feet.	Acre-feet.	Second-feet.
April	2,260	135,600	2,080	124,800	2,370	142,200	2,980
May	3,430	212,660	4,960	307,520	5,965	369,830	4,890
June	2,920	175,200	4,105	246,300	5,040	302,400	3,145
July	470	29,140	1,590	98,580	2,355	146,010	535
August	205	12,710	815	50,530	930	57,660	190
September	210	12,600	545	32,700	470	28,200	150
Total		577,910		860,430		1,046,300	

Month.	1893.		1894.		1895.		1896.
	Second-feet.	Acre-feet.	Second-feet.	Acre-feet.	Second-feet.	Acre-feet.	Second-feet.
April	1,370	82,200			2,580	154,800	1,795
May	3,125	193,750			2,635	163,370	1,600
June	2,540	152,400			3,025	181,500	370
July	330	20,460			1,335	82,770	300
August	340	21,080			1,070	66,340	220
September	405	24,300	*155	9,300	635	38,100	230
Total		494,190				686,880	

* Estimated.

Rating table by which the above table for 1893, 1894, 1895, and 1896 was ma

Feet.	.0	.1	.2	.3	.4	.5	.6	.7	.8	.9
7	125	155	185	215	245	275	310	345	380	42
8	460	500	540	580	620	660	700	750	800	85
9	900	960	1,020	1,090	1,160	1,240	1,330	1,430	1,540	1,65
10	1,760	1,870	1,980	2,100	2,220	2,350	2,470	2,590	2,720	2,85
11	2,980	3,110	3,240	3,380	3,520	3,660	3,800	3,940	4,080	4,22
12	4,360	4,520	4,660	4,800	4,940	5,090	5,240			

Winter flow of the Rio Grande at Rio Grande Station.

[From the Geological Survey records. Area contributing run-off, 11,000 square miles.]

Month.	1894-95.		1895-96.	
	Second feet.	Acre-feet.	Second feet.	Acre-feet.
October			705	43,710
November			835	50,100
December			710	44,020
January			*760	47,120
February	590	33,040	*790	45,820
March	1,370	84,940	1,370	84,940
Total		†117,980		315,710

* Estimated. † Two months.

Summer flow of the Rio Grande at Rio Grande Station.

[From the Geological Survey records.]

Month.	1895.		1896.	
	Second feet.	Acre-feet.	Second feet.	Acre-feet.
April	5,070	304,200	3,480	208,800
May	4,615	286,130	2,710	168,020
June	4,630	277,800	580	34,800
July	1,770	109,740	440	27,280
August	1,480	91,760	195	12,090
September	720	43,200	590	36,580
Total		1,112,830		487,570

Approximate rating table from which the above is computed.

Feet.	.0	.1	.2	.3	.4	.5	.6	.7	.8	.9
4		265	305	345	390	435	480	530	580	630
5	680	730	780	830	880	940	1,005	1,080	1,160	1,250
6	1,340	1,440	1,550	1,670	1,800	1,930	2,070	2,210	2,350	2,490
7	2,640	2,790	2,940	3,090	3,250	3,410	3,570	3,730	3,900	4,070
8	4,250	4,430	4,620	4,820	5,030	5,250	5,470	5,700	5,930	6,180
9	6,430	6,680	6,940	7,200	7,470	7,750	8,040	8,330	8,630	8,930

Winter flow of the Rio Grande at El Paso, Tex.

[From Geological Survey. Area contributing run-off, 30,700 square miles.]

Month.	1889-90.		1890-91.		1891-92.		1892-93.	
	Second-feet.	Acre-feet.	Second-feet.	Acre-feet.	Second-feet.	Acre-feet.	Second-feet.	Acre-feet.
October	Dry.	0	65	4,030	1,485	92,070	Dry (?)	
November	Dry.	0	285	17,100	340	20,400	Dry (?)	
December	70	4,340	535	33,170	345	21,390	Dry (?)	
January	195	12,090	450	27,900	325	20,150	135	8,370
February	290	16,240	810	45,360	475	27,550	140	7,840
March	425	26,350	1,865	115,630	750	46,500	*200	12,400
Total		59,020		243,190		228,060		28,610

* Estimated.

Summer flow of the Rio Grande at El Paso, Tex.

[From Geological Survey reports.]

Month.	1889.		1890.		1891.		1892.		189
	Second-feet.	Acre-feet.	Second feet.	Acre-feet.	Second-feet.	Acre-feet.	Second-feet.	Acre-feet.	Second-feet.
April	.....	.....	2,190	131,400	4,265	255,900	3,145	188,700	910
May	3,115	193,130	5,770	357,740	11,850	734,700	7,090	439,580	3,760
June	2,635	158,100	4,405	264,300	6,715	402,900	2,945	176,700	225
July	235	14,570	855	53,010	2,270	140,740	665	41,230	No re
August	Dry.	0	735	45,570	660	40,920	15	930	No re
September	Dry.	0	175	10,500	765	45,900	Dry(?)	0	No re
Total	.....	*365,800	.....	862,520	.....	1,621,060	.....	847,140	.....

* Five months.

Rating table by which the above is computed (?).

Feet.	.0	.1	.2	.3	.4	.5	.6	.7	.8	.9
5	115	140	170	210	260	320	390	470	560	66
6	770	890	1,040	1,240	1,500	1,785	2,070	2,355	2,640	2,92
7	3,210	3,495	3,780	4,065	4,350	4,635	4,920	5,205	5,490	5,77
8	6,060	6,345	6,630	6,915	7,200	7,485	7,770	8,055	8,340	8,62
9	8,910	9,195	9,480	9,765	10,050	10,335	10,620	10,910	11,200	11,49
10	11,780	12,070	12,360	12,650	12,950	13,250	13,550	13,850	14,150	14,45

Summary of use of water in San Luis Valley, Colorado.

District.	Prior to 1880.					1880.			
	Number of ditches.	Capacity.	Decree.	Acres.	Acre-feet.	Number of ditches.	Capacity.	Decree.	Acres.
20	162	844	628.83	22,935	91,740	182	979	751.55	26,205
21	42	328	591.08	12,900	51,600	51	382	684.07	15,100
22	45	420	1,147.07	22,800	91,200	50	456	1,215.88	24,100
24	19	300	255.50	8,500	34,000	20	307	259.50	8,650
25	108	1,587	661.76	33,050	132,200	121	1,689	682.10	34,100
26	117	1,002	390.62	15,650	46,950	130	1,090	416.32	16,680
27	42	156	39.15	3,285	13,140	49	173	47.42	4,000
35	36	120	.....	2,640	10,560	36	120	.....	2,640
Total	571	4,757	3,714.01	121,760	471,390	639	5,196	4,056.84	131,475
Increase	.....	.....	.....	.....	.....	68	439	342.83	9,715

District.	1881.					1882.			
	Number of ditches.	Capacity.	Decree.	Acres.	Acre-feet.	Number of ditches.	Capacity.	Decree.	Acres.
20	197	1,103	891.33	29,670	118,680	213	2,057	1,580.49	44,115
21	56	431	760.59	17,800	71,200	57	447	782.15	18,300
22	54	517	1,288.64	31,200	124,800	59	566	1,414.60	33,700
24	22	315	262.25	8,700	34,800	22	315	262.25	8,700
25	133	1,768	706.26	35,340	141,360	137	2,025	717.98	35,950
26	136	1,135	431.16	17,270	51,810	141	1,167	441.56	17,680
27	49	173	47.42	4,000	16,000	49	173	47.42	4,000
35	36	120	.....	2,640	10,560	36	120	.....	2,640
Total	683	5,562	4,387.65	146,620	569,210	714	6,870	5,246.45	165,085
Increase	44	366	330.81	15,145	.....	31	1,308	858.80	18,465

Summary of use of water in San Luis Valley, Colorado—Continued.

District.	1883.					1884.				
	Number of ditches.	Capacity.	Decree.	Acres.	Acre-feet.	Number of ditches.	Capacity.	Decree.	Acres.	Acre-feet.
.....	223	2,554	2,013.65	56,315	225,260	232	2,670	2,118.77	58,785	235,140
.....	59	456	812.65	19,900	79,600	60	498	911.18	22,000	88,000
.....	87	686	1,694.69	44,400	177,600	89	708	1,727.19	45,400	181,600
.....	23	321	265.50	8,800	35,200	23	321	265.50	8,800	35,200
.....	141	2,059	736.28	36,810	147,240	152	2,173	782.78	39,120	156,480
.....	151	1,273	467.76	18,725	56,175	161	1,335	509.06	20,360	61,140
.....	49	173	47.42	4,000	16,000	49	173	47.42	4,000	16,000
.....	36	120	.....	2,640	10,560	37	122	.....	2,670	10,680
Total..	769	7,642	6,027.95	191,590	747,635	803	8,000	6,361.90	201,155	784,240
ease....	55	772	781.50	26,505	.....	34	358	333.95	9,565	.....

strict.	1885.					1886.				
	Number of ditches.	Capacity.	Decree.	Acres.	Acre-feet.	Number of ditches.	Capacity.	Decree.	Acres.	Acre-feet.
.....	238	2,797	2,290.36	61,935	247,740	246	3,083	2,507.25	66,045	264,180
.....	63	551	1,019.50	24,000	96,000	66	612	1,165.53	29,300	102,550
.....	92	780	1,801.69	51,700	206,800	95	854	2,110.19	56,400	225,600
.....	23	321	265.50	8,800	35,200	23	321	265.50	8,800	35,200
.....	156	2,188	789.78	39,450	157,800	159	2,218	800.08	39,930	159,720
.....	162	1,344	515.86	20,655	61,965	168	1,380	530.56	21,230	63,690
.....	49	173	47.42	4,000	16,000	49	173	47.42	4,000	16,000
.....	37	122	.....	2,670	10,680	39	126	.....	2,890	11,560
Total..	820	8,276	6,670.11	213,210	832,185	845	8,767	7,426.53	228,595	878,500
ease....	17	276	308.21	12,055	.....	25	491	756.42	15,385	.....

strict.	1887.					1888.				
	Number of ditches.	Capacity.	Decree.	Acres.	Acre-feet.	Number of ditches.	Capacity.	Decree.	Acres.	Acre-feet.
.....	253	3,440	2,896.31	72,675	290,700	265	4,261	3,837.03	88,630	310,205
.....	69	735	1,624.43	38,200	114,600	75	799	1,877.67	42,000	126,000
.....	98	938	2,722.24	57,400	229,600	106	1,009	2,901.42	59,400	237,600
.....	23	321	265.50	8,800	35,200	23	321	265.50	8,800	35,200
.....	162	2,280	820.54	40,950	163,800	169	2,405	872.28	43,600	174,400
.....	180	1,487	554.46	22,210	66,630	184	1,509	561.76	22,505	67,515
.....	49	173	47.42	4,000	16,000	49	173	47.42	4,000	16,000
.....	39	126	.....	2,890	11,560	41	326	.....	4,040	16,160
Total..	873	9,500	8,930.90	247,125	928,090	912	10,803	10,363.08	272,975	983,080
ease....	28	733	1,504.37	18,530	.....	39	1,303	1,432.18	25,850	.....

istrict.	1889.					1890.				
	Number of ditches.	Capacity.	Decree.	Acres.	Acre-feet.	Number of ditches.	Capacity.	Decree.	Acres.	Acre-feet.
.....	266	4,685	4,359.83	97,535	341,370	266	5,465	5,050.31	112,480	337,440
.....	75	799	1,877.67	42,000	126,000	75	799	1,877.67	44,000	88,000
.....	107	1,034	2,974.42	60,000	240,000	107	1,034	2,978.42	60,000	180,000
.....	23	321	265.50	8,800	35,200	25	356	265.50	10,000	40,000
.....	171	2,456	919.18	45,950	183,800	171	2,456	919.18	45,950	137,850
.....	184	1,509	561.76	22,505	67,515	184	1,509	561.76	22,505	45,010
.....	49	173	47.42	4,000	16,000	49	173	47.42	4,000	12,000
.....	47	344	.....	4,520	18,080	48	346	.....	4,780	14,340
Total..	922	11,321	11,005.78	285,310	1,027,965	925	12,138	11,700.26	303,715	854,640
ease....	10	518	642.70	12,335	.....	3	817	694.48	18,405	.....

Summary of use of water in San Luis Valley, Colorado—Continued.

District.	1891.					1892.			
	Number of ditches.	Capacity.	Decree.	Acres.	Acre-feet.	Number of ditches.	Capacity.	Decree.	Acres.
20	266	5,572	5,137.81	166,480	499,440	266	6,034	5,561.76	216,685
21	75	799	1,877.67	46,000	92,000	75	799	1,877.67	45,000
22	107	1,034	2,978.42	55,000	165,000	107	1,034	2,978.42	50,000
24	25	356	265.50	10,000	35,000	25	356	265.50	10,000
25	171	2,480	919.18	46,750	140,250	171	2,501	919.18	47,550
26	184	1,509	561.76	21,430	42,860	184	1,509	561.76	20,290
27	49	173	47.42	4,000	12,000	49	173	47.42	4,000
35	48	346	.....	4,780	14,340	48	346	.....	4,780
Total	925	12,269	11,787.76	354,440	1,000,890	925	12,752	12,211.71	398,305
Increase	.....	131	87.50	50,725	.....	.....	483	423.95	43,865

District.	1893.					1894.			
	Number of ditches.	Capacity.	Decree.	Acres.	Acre-feet.	Number of ditches.	Capacity.	Decree.	Acres.
20	266	6,034	5,561.76	179,785	382,125	266	6,034	5,561.76	166,085
21	75	799	1,877.67	44,000	88,000	75	799	1,877.67	42,000
22	107	1,034	2,978.42	45,000	135,000	107	1,034	2,978.42	50,000
24	25	356	265.50	10,000	30,000	25	356	265.50	10,000
25	171	2,501	919.18	46,200	138,600	171	2,501	919.18	44,750
26	184	1,509	561.76	19,160	38,320	184	1,509	561.76	18,020
27	49	173	47.42	4,000	12,000	49	173	47.42	4,000
35	48	346	.....	4,780	14,340	48	346	.....	4,780
Total	925	12,752	12,211.71	352,925	838,385	925	12,752	12,211.71	339,635
Increase	.....	.....	.....	—45,380	.....	.....	.....	.....	—13,290

District.	1895.					1896.			
	Number of ditches.	Capacity.	Decree.	Acres.	Acre-feet.	Number of ditches.	Capacity.	Decree.	Acres.
20	266	6,034	5,561.76	164,795	394,815	266	6,034	5,561.76	139,795
21	75	799	1,877.67	41,550	109,050	75	799	1,877.67	37,940
22	107	1,034	2,978.42	55,000	165,000	107	1,034	2,978.42	60,625
24	25	356	265.50	9,500	38,000	25	356	265.50	7,050
25	171	2,501	919.18	42,940	161,975	171	2,501	919.18	46,295
26	184	1,509	561.76	16,850	50,550	184	1,509	561.76	20,205
27	49	173	47.42	4,040	16,160	49	173	47.42	2,670
35	48	346	.....	4,430	15,020	48	346	.....	4,180
Total	925	12,752	12,211.71	339,105	950,570	925	12,752	12,211.71	318,760
Change	.....	.....	.....	—530	.....	.....	.....	.....	—20,345

Summary of use of water in Rio Grande drainage of New Mexico.

	Prior to 1880.				1880.				1881.			
strict.	Number of ditches.	Capacity.	Acres.	Acre-feet.	Number of ditches.	Capacity.	Acres.	Acre-feet.	Number of ditches.	Capacity.	Acres.	Acre-feet.
.....	11	32	1,270	5,080	11	32	1,270	5,080	11	32	1,270	5,080
.....	108	909	24,340	83,570	109	933	24,750	84,800	109	933	24,750	84,800
.....	17	161	8,360	25,430	17	161	8,360	25,430	17	161	8,360	25,430
.....	60	334	17,750	45,250	60	334	17,750	45,250	60	334	17,750	45,250
.....	30	204	7,200	21,340	31	220	8,160	24,220	31	220	8,160	24,220
.....	43	156	5,800	13,750	43	156	5,800	13,750	43	156	5,800	13,750
.....	44	117	5,920	10,590	44	117	5,920	10,590	44	117	5,920	10,590
.....	23	60	2,240	4,350	23	60	2,250	4,350	23	60	2,250	4,350
.....	21	119	5,410	19,390	21	119	5,410	19,390	21	119	5,410	19,390
.....	52	422	16,410	33,330	61	440	16,980	35,040	61	440	16,980	35,040
.....	26	85	2,550	4,270	26	85	2,550	4,270	26	85	2,550	4,270
.....	31	400	14,160	44,580	31	400	14,160	44,580	31	400	14,160	44,580
.....	22	311	8,070	32,280	22	311	8,070	32,280	22	311	8,070	32,280
.....	32	1,138	19,300	77,200	32	1,138	18,400	73,600	32	1,138	17,840	71,360
.....	15	288	7,000	28,000	15	288	6,000	24,000	16	300	5,790	23,160
.....	8	162	6,150	24,600	8	162	6,150	24,600	8	162	6,150	24,600
.....	10	710	31,200	124,800	9	650	28,700	114,800	9	650	28,700	114,800
Total ...	553	5,608	183,130	597,810	563	5,606	180,680	586,080	564	5,618	179,910	582,950
ge.....	.....	.....	.....	.....	+10	−2	−2,450	.....	+1	+12	−770	.....

	1882.				1883.				1884.			
strict.	Number of ditches.	Capacity.	Acres.	Acre-feet.	Number of ditches.	Capacity.	Acres.	Acre-feet.	Number of ditches.	Capacity.	Acres.	Acre-feet.
.....	11	32	1,270	5,080	11	32	1,270	5,080	11	32	1,270	5,080
.....	109	933	24,750	84,800	109	933	24,750	84,800	109	933	24,750	84,800
.....	17	161	8,360	25,430	17	161	8,360	23,370	18	167	8,560	25,730
.....	60	334	17,750	45,250	60	334	17,750	45,250	60	334	17,750	45,750
.....	31	220	8,160	24,220	31	220	8,160	24,220	31	220	8,160	24,220
.....	43	156	5,800	13,750	43	156	5,800	13,750	43	156	5,800	13,750
.....	44	117	5,920	10,590	44	117	5,920	10,590	44	117	5,920	10,590
.....	23	60	2,250	4,360	23	60	2,240	4,350	23	60	2,240	4,350
.....	23	123	5,510	19,690	23	123	5,510	19,690	26	129	5,710	20,490
.....	61	440	16,980	35,040	61	440	16,980	35,040	61	440	16,980	35,040
.....	26	85	2,550	4,270	26	85	2,550	4,270	26	85	2,550	4,270
.....	31	400	14,160	44,580	31	400	14,160	44,580	31	400	14,160	44,580
.....	22	311	8,070	32,280	22	311	8,070	32,280	22	311	8,070	32,280
.....	32	1,138	17,840	53,520	32	1,138	17,840	71,360	32	1,138	17,840	71,360
.....	16	300	5,790	17,370	16	300	5,790	23,160	16	300	5,790	23,160
.....	8	162	6,150	15,370	8	162	6,150	24,600	11	179	6,490	25,960
.....	9	650	28,700	71,750	9	650	28,300	113,200	9	650	27,900	111,600
Total ...	566	5,622	180,010	507,350	566	5,622	179,600	579,590	573	5,651	179,940	583,010
ge.....	+2	+4	+100	.....	.....	.....	−410	.....	+7	+29	+340	.....

mary of use of water in Rio Grande drainage of New Mexico—Continued.

ict.	1891.				1892.				1893.			
	Number of ditches.	Capacity.	Acres.	Acre-feet.	Number of ditches.	Capacity.	Acres.	Acre-feet.	Number of ditches.	Capacity.	Acres.	Acre-feet.
.....	11	32	1,270	5,080	11	32	1,270	5,080	11	32	1,270	5,080
.....	120	986	26,120	83,290	123	1,016	26,820	85,590	123	1,016	27,420	86,790
.....	28	194	9,280	25,730	28	194	9,280	25,730	28	194	9,280	25,730
.....	61	346	18,050	45,700	61	346	18,050	45,700	61	346	18,050	45,700
.....	32	236	9,120	26,110	32	236	9,120	26,110	32	236	9,120	26,110
.....	43	156	5,800	13,750	43	156	5,800	13,750	43	156	5,800	13,750
.....	44	117	5,920	10,590	44	117	5,920	10,590	44	117	5,920	10,590
.....	23	60	2,240	4,350	23	60	2,240	4,350	23	60	2,240	4,350
.....	27	131	5,790	20,810	27	131	5,790	20,810	27	131	5,790	20,810
.....	61	440	16,980	31,380	61	440	16,980	31,380	61	440	16,980	31,380
.....	26	85	2,550	4,270	26	85	2,550	4,270	26	85	2,550	4,270
.....	31	396	13,960	43,980	31	396	13,960	43,980	32	406	13,980	44,040
.....	22	311	8,070	28,140	22	311	8,070	28,140	22	311	8,070	32,280
.....	33	1,168	17,840	71,360	33	1,168	17,840	48,880	33	1,168	17,840	71,360
.....	16	300	5,790	23,160	16	300	5,790	15,640	16	300	5,790	17,320
.....	10	147	5,490	16,470	10	147	5,490	13,720	11	187	5,690	12,200
.....	10	600	22,700	68,100	11	679	23,500	58,750	11	679	24,700	49,400
al ...	598	5,705	176,970	522,270	602	5,814	178,470	482,470	604	5,864	180,490	501,160
.....	+3	+18	+750	.....	+4	+109	+1,500	.....	+2	+50	+2,020	.....

t.	1894.				1895.				1896.			
	Number of ditches.	Capacity.	Acres.	Acre-feet.	Number of ditches.	Capacity.	Acres.	Acre-feet.	Number of ditches.	Capacity.	Acres.	Acre-feet.
.....	11	32	1,270	5,080	11	32	1,270	5,080	11	32	1,270	4,450
.....	123	1,016	27,420	86,390	123	1,016	27,520	84,630	118	978	26,870	65,870
.....	28	194	9,280	25,450	28	194	9,280	24,530	28	194	9,280	22,500
.....	61	346	18,050	45,700	61	346	18,050	45,700	61	346	18,050	32,060
.....	32	236	9,120	26,110	32	236	9,120	26,110	32	236	9,120	24,520
.....	43	156	5,800	13,750	43	156	5,800	13,750	43	156	5,800	10,450
.....	44	117	5,920	10,590	44	117	5,920	10,590	44	117	5,920	8,040
.....	23	60	2,240	4,350	23	60	2,240	4,350	23	60	2,240	2,930
.....	27	131	5,790	20,810	27	131	5,790	20,210	27	131	5,790	16,240
.....	61	440	16,980	31,390	62	580	18,380	33,990	62	580	17,380	20,650
.....	26	85	2,550	4,270	26	85	2,550	4,270	26	85	2,550	3,470
.....	32	406	14,020	44,180	32	406	14,060	44,280	32	406	14,060	38,040
.....	22	311	8,070	28,140	22	311	8,070	32,280	22	311	8,070	23,860
.....	33	1,168	17,840	48,880	33	1,168	17,840	62,070	33	1,168	17,840	28,940
.....	16	300	5,790	15,640	16	300	5,790	17,370	16	300	5,790	12,650
.....	11	247	6,490	16,210	15	295	8,500	25,500	14	285	9,700	16,900
.....	11	679	26,000	65,000	11	679	27,100	67,750	11	679	27,100	58,250
al ...	604	5,924	182,630	491,940	609	6,112	187,280	522,460	603	6,064	186,830	380,820
.....	.....	+60	+2,140	.....	+5	+188	+4,650	.....	—6	—48	—450	.....

Summary—District No. 20, Colorado.

Sheet.	Prior to 1880.					1880.				
	Number of ditches.	Capacity.	Decree.	Acres.	Acre-feet.	Number of ditches.	Capacity.	Decree.	Acres.	Ac fe
1	25	137	117.30	4,400	17,600	25	142	125.03	4,520	1
2	25	193	117.67	4,330	17,320	25	214	132.07	4,930	1
3	25	93	67.28	1,570	6,280	25	93	67.28	1,570	(
4	25	140	114.86	3,440	13,760	25	143	116.46	3,475	1
5	25	55	47.05	1,480	5,920	25	55	47.05	1,480	
6	25	76	61.21	1,800	7,200	25	108	87.01	2,610	1
7	12	150	103.46	5,915	23,660	25	190	154.75	7,160	2
8	0					7	36	21.90	460	
9										
10										
11										
Total	162	844	628.83	22,935	91,740	182	979	751.55	26,205	1

Sheet.	1881.					1882.				
	Number of ditches.	Capacity.	Decree.	Acres.	Acre-feet.	Number of ditches.	Capacity.	Decree.	Acres.	A
1	25	143	125.83	4,540	18,160	25	145	129.03	4,630	
2	25	244	156.27	5,650	22,600	25	250	162.57	5,820	
3	25	95	72.54	1,650	6,600	25	95	72.54	1,650	
4	25	144	117.66	3,550	14,200	25	144	117.66	3,550	
5	25	55	47.05	1,480	5,920	25	60	53.05	1,670	
6	25	111	91.01	2,750	11,000	25	111	91.01	2,750	
7	25	218	182.35	8,120	32,480	25	232	194.55	9,320	
8	22	93	98.62	1,930	7,720	25	835	653.18	12,000	
9	0					13	185	106.90	2,725	
10										
11										
Total	197	1,103	891.33	29,670	118,680	213	2,057	1,580.49	44,115	

Sheet.	1883.					1884.			
	Number of ditches.	Capacity.	Decree.	Acres.	Acre-feet.	Number of ditches.	Capacity.	Decree.	Acres.
1	25	153	139.83	4,930	19,720	25	153	139.83	4,930
2	25	253	164.17	5,880	23,520	25	253	164.17	5,880
3	25	112	88.98	2,005	8,020	25	112	88.98	2,005
4	25	144	118.26	3,565	14,260	25	144	118.26	3,565
5	25	60	53.05	1,670	6,680	25	60	53.05	1,670
6	25	114	93.51	2,840	11,360	25	117	95.91	2,920
7	25	232	194.55	9,320	37,280	25	250	206.15	9,750
8	25	836	654.18	19,000	76,000	25	840	661.38	19,300
9	23	650	507.12	7,105	28,420	25	710	558.62	7,495
10	0					7	31	32.42	1,270
11									
Total	223	2,554	2,013.65	56,315	225,260	232	2,670	2,118.77	58,785

Sheet.	1885.					1886.			
	Number of ditches.	Capacity.	Decree.	Acres.	Acre-feet.	Number of ditches.	Capacity.	Decree.	Acres.
1	25	153	139.83	4,930	19,720	25	154	141.33	4,970
2	25	253	164.17	5,880	23,520	25	255	166.97	6,030
3	25	112	88.98	2,005	8,020	25	112	88.98	2,005
4	25	144	118.26	3,565	14,260	25	147	121.60	3,640
5	25	60	53.05	1,670	6,680	25	60	53.05	1,670
6	25	121	100.08	3,000	12,000	25	129	106.78	3,290
7	25	250	206.15	9,750	39,000	25	256	214.82	10,000
8	25	877	695.38	20,570	82,280	25	908	724.04	21,580
9	25	710	558.62	7,495	29,980	25	725	567.06	7,700
10	13	117	105.84	3,070	12,280	21	337	322.62	5,240
11						0			
Total	238	2,797	2,230.36	61,935	247,740	246	3,083	2,507.25	66,045

Summary—District No. 20, Colorado—Continued.

t.	1887.					1888.				
	Number of ditches.	Capacity.	Decree.	Acres.	Acre-feet.	Number of ditches.	Capacity.	Decree.	Acres.	Acre-feet.
.....	25	154	141.33	4,970	19,880	25	154	141.33	4,970	17,395
.....	25	255	166.97	6,030	24,120	25	255	166.97	6,030	21,105
.....	25	112	88.98	2,005	8,020	25	112	88.98	2,005	7,015
.....	25	147	121.60	3,640	14,560	25	147	121.60	3,640	12,740
.....	25	60	53.05	1,670	6,680	25	62	53.85	1,700	5,950
.....	25	132	109.58	3,330	13,320	25	140	116.99	3,520	12,320
.....	25	261	218.68	10,200	40,800	25	274	230.99	10,540	36,890
.....	25	948	752.64	22,660	90,640	25	1,000	790.54	24,125	84,440
.....	25	779	605.86	8,630	34,520	25	1,229	957.26	15,750	55,125
.....	25	578	546.72	8,780	35,120	25	583	553.12	9,010	31,535
.....	3	14	90.90	760	3,040	15	305	615.40	7,340	25,690
tal..	253	3,440	2,896.31	72,675	290,700	265	4,261	3,837.03	88,630	310,205

t.	1889.					1890.				
	Number of ditches.	Capacity.	Decree.	Acres.	Acre-feet.	Number of ditches.	Capacity.	Decree.	Acres.	Acre-feet.
.....	25	154	141.33	4,970	17,395	25	154	141.33	4,970	14,910
.....	25	255	166.97	6,030	21,105	25	255	166.97	6,030	18,090
.....	25	112	88.98	2,005	7,015	25	112	88.98	2,005	6,015
.....	25	147	121.60	3,640	12,740	25	147	121.60	3,640	10,920
.....	25	62	53.85	1,700	5,950	25	62	53.85	1,700	5,100
.....	25	148	123.69	3,760	13,160	25	155	129.39	3,960	11,880
.....	25	278	232.99	10,620	37,170	25	288	239.49	10,840	32,520
.....	25	1,080	849.44	26,100	91,350	25	1,155	924.54	29,000	87,000
.....	25	1,390	1,134.16	17,100	59,850	25	1,966	1,622.64	26,825	80,475
.....	25	583	553.12	9,010	31,535	25	695	667.82	10,910	32,730
.....	16	476	893.70	12,600	44,100	16	476	893.70	12,600	37,800
tal..	266	4,685	4,359.83	97,535	341,370	266	5,465	5,050.31	112,480	337,440

t.	1891.					1892.				
	Number of ditches.	Capacity.	Decree.	Acres.	Acre-feet.	Number of ditches.	Capacity.	Decree.	Acres.	Acre-feet.
.....	25	154	141.33	4,970	14,910	25	154	141.33	4,970	14,910
.....	25	255	166.97	6,030	18,090	25	255	166.97	6,030	18,090
.....	25	112	88.98	2,005	6,015	25	112	88.98	2,005	6,015
.....	25	147	121.60	3,640	10,920	25	151	126.20	3,800	11,400
.....	25	62	53.85	1,700	5,100	25	66	56.15	1,755	5,235
.....	25	155	129.39	3,960	11,880	25	156	130.59	3,995	11,985
.....	25	288	239.49	10,840	32,520	25	288	245.74	10,840	21,680
.....	25	1,230	976.54	31,000	93,000	25	1,681	1,270.24	42,980	85,960
.....	25	1,998	1,658.14	56,325	168,975	25	2,000	1,774.04	76,500	153,000
.....	25	695	667.82	12,910	38,730	25	695	667.82	15,410	30,820
.....	16	476	893.70	33,100	99,300	16	476	893.70	48,400	96,800
tal..	266	5,572	5,137.81	166,480	499,440	266	6,034	5,561.76	216,685	455,925

t.	1893.					1894.				
	Number of ditches.	Capacity.	Decree.	Acres.	Acre-feet.	Number of ditches.	Capacity.	Decree.	Acres.	Acre-feet.
.....	25	154	141.33	4,970	14,910	25	154	141.33	4,970	14,910
.....	25	255	166.97	6,030	18,090	25	255	166.97	6,030	18,090
.....	25	112	88.98	2,005	6,015	25	112	88.98	2,005	6,015
.....	25	151	126.20	3,800	11,400	25	151	126.20	3,800	11,400
.....	25	66	56.15	1,755	5,265	25	66	56.15	1,755	5,265
.....	25	156	130.59	3,995	11,985	25	156	130.59	3,995	11,985
.....	25	288	245.74	10,840	21,680	25	288	245.74	10,840	17,345
.....	25	1,681	1,270.24	42,980	85,960	25	1,681	1,270.24	42,980	68,770
.....	25	2,000	1,774.04	43,100	86,200	25	2,000	1,774.04	31,600	50,560
.....	25	695	667.82	14,410	28,820	25	695	667.82	13,410	21,455
.....	16	476	893.70	45,900	91,800	16	476	893.70	44,700	71,520
al..	266	6,034	5,561.76	179,785	382,125	266	6,034	5,561.76	166,085	297,315

Summary—District No. 20 Colorado—Continued.

Sheet.	1895.					1896.			
	Number of ditches.	Capacity.	Decree.	Acres.	Acre-feet.	Number of ditches.	Capacity.	Decree.	Acres.
1	25	154	141.33	4,970	14,910	25	154	141.33	4,475
2	25	255	166.97	6,090	18,090	25	255	166.97	5,130
3	25	112	88.98	2,005	6,015	25	112	88.98	1,825
4	25	151	126.20	3,809	11,400	25	151	126.20	3,350
5	25	66	56.15	1,755	5,265	25	66	56.15	1,545
6	25	156	130.59	3,995	11,985	25	156	130.59	3,330
7	25	288	245.74	10,940	25,160	25	288	245.74	9,370
8	25	1,681	1,270.24	42,980	98,855	25	1,681	1,270.24	36,545
9	25	2,000	1,774.04	31,600	72,680	25	2,000	1,774.04	24,790
10	25	695	667.82	13,170	30,290	25	695	667.82	12,400
11	16	476	893.70	43,550	100,165	16	476	893.70	37,085
Total	266	6,034	5,561.76	164,795	394,815	266	6,034	5,561.76	139,795

Estimate of areas watered under large canals.

Year.	Excelsior, No. 153.	Rio Grande, No. 198.	Monte Vista, No. 201.	Empire, No. 214.	San Luis Valley, No. 225.	Costilla, No. 239.	Farmers' Union, No. 254.
	Acres.	*Acres.*	*Acres.*	*Acres.*	*Acres.*	*Acres.*	*Acres.*
1896	3,000	30,340	8,845	7,450	7,500	1,050	34,755
1895	3,500	36,000	10,500	10,000	10,000	1,200	41,000
1894	3,500	36,000	10,500	10,000	10,000	1,500	42,000
1893	3,500	36,000	12,000	15,000	15,000	2,500	43,000
1892	3,500	36,000	15,000	40,000	20,000	3,500	45,000
1891	3,500	24,000	15,000	30,000	10,000	2,000	30,000
1890	3,500	22,000	9,825	10,000	5,000	1,000	20,000
1889	3,280	20,400	9,150	4,000	2,600	1,000	10,000
1888	.....	.....	.....	.....	.....	.....	5,000

Summary—District No. 21, Colorado.

Sheet.	Prior to 1880.					1880.			
	No. of ditches.	Capacity.	Decree.	Acres.	Acre-feet.	No. of ditches.	Capacity.	Decree.	Acres
1	25	160	294.12	6,000	24,000	25	160	294.12	6,00
2	17	168	296.96	6,900	27,600	25	217	382.75	9,00
3	0	.....	.....	.....	.....	1	5	7.20	10
Total	42	328	591.08	12,900	51,600	51	382	684.07	15,10

Sheet.	1881.					1882.			
	No. of ditches.	Capacity.	Decree.	Acres.	Acre-feet.	No. of ditches.	Capacity.	Decree.	Acres
1	25	160	294.12	6,000	24,000	25	160	294.12	6,00
2	25	217	382.75	9,000	36,000	25	227	409.96	9,30
3	6	54	83.72	2,800	11,200	7	60	78.07	3,00
Total	56	431	760.59	17,800	71,200	57	447	782.15	18,30

Sheet.	1883.					1884.			
	No. of ditches.	Capacity.	Decree.	Acres.	Acre-feet.	No. of ditches.	Capacity.	Decree.	Acres
1	25	160	294.12	6,000	24,000	25	160	294.12	6,00
2	25	227	409.96	9,300	37,200	25	247	486.26	10,00
3	9	69	108.57	4,600	18,400	10	91	130.80	6,00
Total	59	456	812.65	19,900	79,600	60	498	911.18	22,00

Summary—District No. 21, Colorado—Continued.

	1885.					1886.				
	No. of ditches.	Capacity.	Decree.	Acres.	Acre-feet.	No. of ditches.	Capacity.	Decree.	Acres.	Acre-feet.
.....	25	160	294.12	6,000	24,000	25	160	294.12	6,000	21,000
.....	25	247	486.26	10,000	40,000	25	247	486.26	10,000	35,600
.....	13	144	239.12	8,000	32,000	16	205	385.15	13,300	46,550
Total...	63	551	1,019.50	24,000	96,000	66	612	1,165.53	29,300	102,550

	1887.					1888.				
	Number of ditches.	Capacity.	Decree.	Acres.	Acre-feet.	Number of ditches.	Capacity.	Decree.	Acres.	Acre-feet.
.....	25	160	366.75	6,700	20,100	25	160	366.75	6,700	20,100
.....	25	284	690.16	12,300	36,900	25	284	690.16	12,300	36,900
.....	19	291	567.52	19,200	57,600	25	355	820.76	23,000	69,000
Total.	69	735	1,624.43	38,200	114,600	75	799	1,877.67	42,000	126,000

	1889.					1890.				
	Number of ditches.	Capacity.	Decree.	Acres.	Acre-feet.	Number of ditches.	Capacity.	Decree.	Acres.	Acre-feet.
.....	25	160	366.75	6,700	20,100	25	160	366.75	7,000	14,000
.....	25	284	690.16	12,300	36,900	25	284	690.16	12,800	25,600
.....	25	355	820.76	23,000	69,000	25	355	820.76	24,200	48,400
Total.	75	799	1,877.67	42,000	126,000	75	799	1,877.67	44,000	88,000

	1891.					1892.				
	Number of ditches.	Capacity.	Decree.	Acres.	Acre-feet.	Number of ditches.	Capacity.	Decree.	Acres.	Acre-feet.
.....	25	160	366.75	7,400	14,800	25	160	366.75	7,200	14,400
.....	25	284	690.16	13,400	26,800	25	284	690.16	13,100	26,200
.....	25	355	820.76	25,200	50,400	25	355	820.76	24,700	49,400
Total.	75	799	1,877.67	46,000	92,000	75	799	1,877.67	45,000	90,000

	1893.					1894.				
	Number of ditches.	Capacity.	Decree.	Acres.	Acre-feet.	Number of ditches.	Capacity.	Decree.	Acres.	Acre-feet.
.....	25	160	366.75	7,000	14,000	25	160	366.75	6,700	10,050
.....	25	284	690.16	12,800	25,600	25	284	690.16	12,300	18,450
.....	25	355	820.76	24,200	48,400	25	355	820.76	23,000	34,500
Total.	75	799	1,877.67	44,000	88,000	75	799	1,877.67	42,000	63,000

	1895.					1896.				
	Number of ditches.	Capacity.	Decree.	Acres.	Acre-feet.	Number of ditches.	Capacity.	Decree.	Acres.	Acre-feet.
.....	25	160	366.75	6,655	20,230	25	160	366.75	6,055	10,595
.....	25	284	690.16	12,080	36,550	25	284	690.16	11,080	7,265
.....	25	355	820.76	22,815	52,270	25	355	820.76	20,805	8,475
Total.	75	799	1,877.67	41,550	109,050	75	799	1,877.67	37,940	26,335

Summary—District No. 22, Colorado.

Sheet.	Prior to 1880.					1880.			
	Number of ditches.	Capacity.	Decree.	Acres.	Acre-feet.	Number of ditches.	Capacity.	Decree.	Acre
1	25	250	621.80	12,800	51,200	25	250	621.80	12,8
2	20	170	525.27	10,000	40,000	25	206	594.08	11,3
3						0			
4									
5									
Total	45	420	1,147.07	22,800	91,200	50	456	1,215.88	24,1

Sheet.	1881.					1882.			
	Number of ditches.	Capacity.	Decree.	Acres.	Acre-feet.	Number of ditches.	Capacity.	Decree.	Acre
1	25	250	621.80	12,800	51,200	25	250	621.80	12,8
2	25	206	594.08	11,300	45,200	25	206	594.08	11,3
3	4	61	72.76	7,100	28,400	9	110	198.72	9,6
4						0			
5									
Total	54	517	1,288.64	31,200	124,800	59	566	1,414.60	33,7

Sheet.	1883.					1884.			
	Number of ditches.	Capacity.	Decree.	Acres.	Acre-feet	Number of ditches.	Capacity.	Decree.	Acr
1	25	252	625.80	13,000	52,000	25	252	625.80	13,
2	25	206	594.08	11,300	45,200	25	207	596.08	11,
3	25	170	351.81	14,000	56,000	25	170	355.81	14,
4	12	58	113.00	6,100	24,400	14	79	149.50	7,
5									
Total	87	686	1,684.69	44,400	177,600	89	708	1,727.19	45,

Sheet.	1885.					1886.			
	Number of ditches.	Capacity.	Decree.	Acres.	Acre-feet.	Number of ditches.	Capacity.	Decree.	Acr
1	25	252	625.80	13,000	52,000	25	252	625.80	13,
2	25	212	604.08	11,600	46,400	25	212	604.08	11,
3	25	170	355.81	14,000	56,000	25	217	514.56	15,
4	17	146	216.00	13,100	52,400	20	173	365.75	16,
5									
Total	92	780	1,801.69	51,700	206,800	95	854	2,110.19	56,

Sheet.	1887.					1888.			
	Number of ditches.	Capacity.	Decree.	Acres.	Acre-feet.	Number of ditches.	Capacity.	Decree.	Acr
1	25	254	629.80	13,200	52,800	25	254	633.80	13,
2	25	212	604.08	11,600	46,400	25	219	615.12	11,
3	25	217	514.56	15,700	62,800	25	233	587.40	16,
4	23	255	973.80	16,900	67,600	25	268	1,017.10	17,
5	0					6	35	48.00	
Total	98	938	2,722.24	57,400	229,600	106	1,009	2,901.42	59,

STANFORD
DOES NOT CIRCULATE

Summary—District No. 22, Colorado—Continued.

	1889.					1890.				
	Number of ditches.	Capacity.	Decree.	Acres.	Acre-feet.	Number of ditches.	Capacity.	Decree.	Acres.	Acre-feet.
.....	25	254	633.80	13,300	53,200	25	254	633.80	13,300	39,900
.....	25	229	646.12	12,000	48,000	25	229	646.12	12,000	36,000
.....	25	234	539.40	16,000	64,000	25	234	590.40	16,000	48,000
.....	25	272	1,037.10	17,700	70,800	25	272	1,040.10	17,700	53,100
.....	7	45	68.00	1,000	4,000	7	45	68.00	1,000	3,000
tal..	107	1,034	2,974.42	60,000	240,000	107	1,034	2,978.42	60,000	180,000

	1891.					1892.				
	Number of ditches.	Capacity.	Decree.	Acres.	Acre-feet.	Number of ditches.	Capacity.	Decree.	Acres.	Acre-feet.
.....	25	254	633.80	12,500	37,500	25	254	633.80	11,200	33,600
.....	25	229	646.12	11,000	33,000	25	229	646.12	10,000	30,000
.....	25	234	590.40	15,000	45,000	25	234	590.40	13,500	40,500
.....	25	272	1,040.10	15,600	46,800	25	272	1,040.10	14,500	43,500
.....	7	45	68.00	900	2,700	7	45	68.00	800	2,400
tal..	107	1,034	2,978.42	55,000	165,000	107	1,034	2,978.42	50,000	150,000

	1893.					1894.				
	Number of ditches.	Capacity.	Decree.	Acres.	Acre-feet.	Number of ditches.	Capacity.	Decree.	Acres.	Acre-feet.
.....	25	254	633.80	10,000	30,000	25	254	633.80	11,200	28,000
.....	25	229	646.12	9,000	27,000	25	229	646.12	10,000	25,000
.....	25	234	590.40	12,500	37,500	25	234	590.40	13,500	33,750
.....	25	272	1,040.10	12,700	38,100	25	272	1,040.10	14,500	36,250
....	7	45	68.00	800	2,400	7	45	68.00	800	2,000
tal..	107	1,034	2,978.42	45,000	135,000	107	1,034	2,978.42	50,000	125,000

	1895.					1896.				
	Number of ditches.	Capacity.	Decree.	Acres.	Acre-feet.	Number of ditches.	Capacity.	Decree.	Acres.	Acre-feet.
.....	25	254	633.80	12,500	37,500	25	254	633.80	13,455	36,660
.....	25	229	646.12	11,000	33,000	25	229	646.12	11,995	21,815
.....	25	234	590.40	15,000	45,000	25	234	590.40	16,250	18,880
.....	25	272	1,040.10	15,600	46,800	25	272	1,040.10	17,890	19,220
.....	7	45	68.00	900	2,700	7	45	68.00	1,035	1,710
tal..	107	1,034	2,978.42	55,000	165,000	107	1,034	2,978.42	60,625	98,285

Summary—District No. 25, Colorado.

	Prior to 1880.					1880.				
	Number of ditches.	Capacity.	Decree.	Acres.	Acre-feet.	Number of ditches.	Capacity.	Decree.	Acres.	Acre-feet.
.....	25	446	152.30	7,600	30,400	25	446	152.30	7,600	30,400
.....	25	556	336.38	16,800	67,200	25	568	339.38	17,000	68,000
.....	25	360	104.41	5,200	20,800	25	364	106.41	5,300	21,200
.....	25	170	55.61	2,800	11,200	25	170	55.61	2,800	11,200
.....	8	55	13.06	650	2,600	21	141	28.40	1,400	5,600
.....	.....	.....	.....	.....	.....	0	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
tal..	108	1,587	661.76	33,050	132,200	121	1,689	682.10	34,100	136,400

Summary, District No. 25, Colorado—Continued.

Sheet.	1881.					1882.				
	Number of ditches.	Capacity.	Decree.	Acres.	Acre-feet.	Number of ditches.	Capacity.	Decree.	Acres.	A f
1	25	446	152.30	7,600	30,400	25	646	159.50	8,000	
2	25	568	339.38	17,000	68,000	25	568	339.38	17,000	
3	25	364	106.41	5,300	21,200	25	364	106.41	5,300	
4	25	178	57.61	2,900	11,600	25	185	60.01	3,000	
5	25	167	40.80	2,050	8,200	25	167	40.80	2,050	
6	8	45	9.76	490	1,960	12	95	11.88	600	
7						0				
Total	133	1,768	706.26	35,340	141,360	137	2,025	717.98	35,950	

Sheet.	1883.					1884.			
	Number of ditches.	Capacity.	Decree.	Acres.	Acre-feet.	Number of ditches.	Capacity.	Decree.	Acres.
1	25	658	165.30	8,260	33,040	25	658	172.50	8,600
2	25	580	346.88	17,350	69,400	25	603	358.88	17,950
3	25	364	106.41	5,300	21,200	25	385	112.71	5,630
4	25	185	60.01	3,000	12,000	25	190	62.81	3,140
5	25	167	40.80	2,050	8,200	25	171	41.80	2,100
6	16	105	16.88	850	3,400	25	156	27.28	1,350
7	0					2	10	6.80	350
Total	141	2,059	736.28	36,810	147,240	152	2,173	782.78	39,120

Sheet.	1885.					1886.			
	Number of ditches.	Capacity.	Decree.	Acres.	Acre-feet.	Number of ditches.	Capacity.	Decree.	Acres.
1	25	658	172.50	8,600	34,400	25	658	172.50	8,600
2	25	603	358.88	17,950	71,800	25	608	362.08	18,100
3	25	385	112.71	5,630	22,520	25	385	112.71	5,630
4	25	190	62.81	3,140	12,560	25	203	64.61	3,200
5	25	171	41.80	2,100	8,400	25	171	41.80	2,100
6	25	160	30.48	1,500	6,000	25	160	30.48	1,500
7	6	21	10.60	530	2,120	9	33	15.90	800
Total	156	2,188	789.78	39,450	157,800	159	2,218	800.08	39,930

Sheet.	1887.					1888.			
	Number of ditches.	Capacity.	Decree.	Acres.	Acre-feet.	Number of ditches.	Capacity.	Decree.	Acres.
1	25	658	172.50	8,600	34,400	25	686	191.50	9,600
2	25	628	375.94	18,800	75,200	25	648	392.94	19,650
3	25	390	114.21	5,700	22,800	25	434	117.01	5,850
4	25	203	64.61	3,200	12,800	28	203	64.61	3,200
5	25	171	41.80	2,100	8,400	25	171	41.80	2,100
6	25	160	30.48	1,500	6,000	25	169	33.98	1,700
7	12	70	21.00	1,050	4,200	19	94	30.44	1,500
Total	162	2,280	820.54	40,950	163,800	169	2,405	872.28	43,600

Sheet.	1889.					1890.			
	Number of ditches.	Capacity.	Decree.	Acres.	Acre-feet.	Number of ditches.	Capacity.	Decree.	Acres.
1	25	686	191.50	9,600	38,400	25	686	191.50	9,600
2	25	692	436.74	21,800	87,200	25	692	436.74	21,800
3	25	434	117.01	5,850	23,400	25	434	117.01	5,850
4	25	203	64.61	3,200	12,800	25	203	64.61	3,200
5	25	171	41.80	2,100	8,400	25	171	41.80	2,100
6	25	169	33.98	1,700	6,800	25	169	33.98	1,700
7	21	101	33.54	1,700	6,800	21	101	33.54	1,700
Total	171	2,456	919.18	45,950	183,800	171	2,456	919.18	45,950

Summary—District No. 25, Colorado—Continued.

	1891.					1892.				
	Number of ditches.	Capacity.	Decree.	Acres.	Acre-feet.	Number of ditches.	Capacity.	Decree.	Acres.	Acre-feet.
.....	25	686	191.50	9,600	28,800	25	686	191.50	9,600	28,800
.....	25	692	436.74	21,800	65,400	25	692	436.74	21,800	65,400
.....	25	434	117.01	5,850	17,550	25	434	117.01	5,850	17,550
.....	25	208	64.61	3,200	9,600	25	208	64.61	3,200	9,600
.....	25	171	41.80	2,100	6,300	25	171	41.80	2,100	6,300
.....	25	169	33.98	1,700	5,100	25	169	33.98	1,700	5,100
....	21	125	33.54	2,500	7,500	21	146	33.54	3,300	9,900
tal..	171	2,480	919.18	46,750	140,250	171	2,501	919.18	47,550	142,650

	1893.					1894.				
t.	Number of ditches.	Capacity.	Decree.	Acres.	Acre-feet.	Number of ditches.	Capacity.	Decree.	Acres.	Acre-feet.
.....	25	686	191.50	9,300	27,900	25	686	191.50	9,000	22,500
.....	25	692	436.74	21,200	63,600	25	692	436.74	20,500	51,250
.....	25	434	117.01	5,700	17,100	25	434	117.01	5,500	13,750
.....	25	208	64.61	3,100	9,300	25	208	64.61	3,050	7,625
.....	25	171	41.80	2,050	6,150	25	171	41.80	2,000	5,000
.....	25	169	33.98	1,650	4,950	25	169	33.98	1,600	4,000
.....	21	146	33.54	3,200	9,600	21	146	33.54	3,100	7,750
tal..	171	2,501	919.18	46,200	138,600	171	2,501	919.18	44,750	111,875

	1895.					1896.				
t.	Number of ditches.	Capacity.	Decree.	Acres.	Acre-feet.	Number of ditches.	Capacity.	Decree.	Acres.	Acre-feet.
.....	25	686	191.50	9,135	36,195	25	686	191.50	9,375	24,245
.....	25	692	436.74	19,350	76,755	25	692	436.74	21,305	55,095
.....	25	434	117.01	5,290	20,965	25	434	117.01	5,790	14,050
.....	25	208	64.61	2,810	9,930	25	208	64.61	3,125	8,110
.....	25	171	41.80	1,910	7,060	25	171	41.80	1,910	4,980
.....	25	169	33.98	1,520	4,325	25	169	33.98	1,585	4,370
.....	21	146	33.54	2,925	6,745	21	146	33.54	3,205	6,650
al..	171	2,501	919.18	42,940	161,975	171	2,501	919.18	46,295	118,100

Summary—District No. 26, Colorado.

	Prior to 1880.					1880.				
:	Number of ditches.	Capacity.	Decree.	Acres.	Acre-feet.	Number of ditches.	Capacity.	Decree.	Acres.	Acre-feet.
.....	25	237	108.18	4,300	12,900	25	237	108.18	4,300	12,900
.....	25	171	94.12	3,800	11,400	25	171	94.12	3,800	11,400
.....	25	290	101.00	4,050	12,150	25	290	101.00	4,050	12,150
.....	25	211	54.92	2,200	6,600	25	211	54.92	2,200	6,600
....	17	93	32.40	1,300	3,900	25	131	41.96	1,680	5,040
.....	0	.....	.....	.....	.....	5	50	16.20	650	1,950
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
al..	117	1,002	396.62	15,650	46,950	130	1,090	416.32	16,680	50,040

Summary—District No. 26, Colorado—Continued.

Sheet.	1881.					1882.			
	Number of ditches.	Capacity.	Decree.	Acres.	Acre-feet.	Number of ditches.	Capacity.	Decree.	Acr
1	25	237	108.18	4,300	12,900	25	237	108.18	4,
2	25	171	94.12	3,800	11,400	25	171	94.12	3,
3	25	302	105.80	4,240	12,720	25	310	108.80	4,
4	25	211	54.92	2,200	6,600	25	211	54.92	2,
5	25	131	41.90	1,680	5,040	25	134	44.30	1,
6	11	83	26.24	1,050	3,150	16	104	31.24	1,
7						0			
8									
Total	136	1,135	431.16	17,270	51,810	141	1,167	441.56	17,

Sheet.	1883.					1884.			
	Number of ditches.	Capacity.	Decree.	Acres.	Acre-feet.	Num. ber of ditches.	Capacity.	Decree.	Ac
1	25	237	108.18	4,300	12,900	25	237	108.18	4,
2	25	171	94.12	3,800	11,400	25	171	94.12	3,
3	25	310	108.80	4,360	13,080	25	310	108.80	4,
4	25	211	54.92	2,200	6,600	25	211	54.92	2,
5	25	134	44.30	1,770	5,310	25	134	44.30	1,
6	25	208	55.84	2,230	6,690	25	219	57.24	2,
7	1	2	1.60	65	195	11	53	41.50	1,
8									
Total	151	1,273	467.76	18,725	56,175	161	1,335	509.06	20

Sheet.	1885.					1886.			
	Number of ditches.	Capacity.	Decree.	Acres.	Acre-feet.	Number of ditches.	Capacity.	Decree.	Ac
1	25	237	108.18	4,300	12,900	25	237	108.18	4
2	25	171	94.12	3,800	11,400	25	171	94.12	3
3	25	310	108.80	4,360	13,080	25	324	113.80	4
4	25	211	54.92	2,200	6,600	25	211	54.92	2
5	25	134	44.30	1,770	5,310	25	134	44.30	1
6	25	226	62.44	2,500	7,500	25	226	62.44	2
7	12	55	43.10	1,725	5,175	18	77	52.80	2
8						0			
Total	162	1,344	515.86	20,655	61,965	168	1,380	530.56	21

Sheet.	1887.					1888.			
	Number of ditches.	Capacity.	Decree.	Acres.	Acre-feet.	Number of ditches.	Capacity.	Decree.	Ac
1	25	237	108.18	4,300	12,900	25	237	108.18	4
2	25	171	94.12	3,800	11,400	25	171	94.12	3
3	25	324	113.80	4,560	13,680	25	324	113.80	4
4	25	211	54.92	2,200	6,600	25	211	54.92	2
5	25	134	44.30	1,770	5,310	25	134	44.30	1
6	25	226	62.44	2,500	7,500	25	226	62.44	2
7	25	159	68.40	2,750	8,250	25	159	68.40	2
8	5	25	8.30	330	990	9	47	15.60	
Total	180	1,487	554.46	22,210	66,630	184	1,509	561.76	22

STANFORD DOES NOT CIRCULATE

Summary—District No. 36, Colorado—Continued.

	1889.					1890.				
t.	Number of ditches.	Capacity.	Decree.	Acres.	Acre-feet.	Number of ditches.	Capacity.	Decree.	Acres.	Acre-feet.
.....	25	237	108.18	4,300	12,900	25	237	108.18	4,300	8,600
.....	25	171	94.12	3,800	11,400	25	171	94.12	3,800	7,600
.....	25	324	113.80	4,560	13,680	25	324	113.80	4,560	9,120
.....	25	211	54.92	2,200	6,600	25	211	54.92	2,200	4,400
.....	25	134	44.30	1,770	5,310	25	134	44.30	1,770	3,540
.....	25	226	62.44	2,500	7,500	25	226	62.44	2,500	5,000
.....	25	159	68.40	2,750	8,250	25	159	68.40	2,750	5,500
.....	9	47	15.60	625	1,875	9	47	15.60	625	1,250
tal.	184	1,509	561.76	22,505	67,515	184	1,509	561.76	22,505	45,010

	1891.					1892.				
t.	Number of ditches.	Capacity.	Decree.	Acres.	Acre-feet.	Number of ditches.	Capacity.	Decree.	Acres.	Acre-feet.
.....	25	237	108.18	4,100	8,200	25	237	108.18	3,900	7,800
.....	25	171	94.12	3,600	7,200	25	171	94.12	3,400	6,800
.....	25	324	113.80	4,340	8,680	25	324	113.80	4,110	8,220
.....	25	211	54.92	2,090	4,180	25	211	54.92	1,980	3,960
.....	25	134	44.30	1,680	3,360	25	134	44.30	1,590	3,180
.....	25	226	62.44	2,370	4,740	25	226	62.44	2,250	4,500
.....	25	159	68.40	2,650	5,300	25	159	68.40	2,500	5,000
.....	9	47	15.60	600	1,200	9	47	15.60	560	1,120
tal..	184	1,509	561.76	21,430	42,860	184	1,509	561.76	20,290	40,580

	1893.					1894.				
t.	Number of ditches.	Capacity.	Decree.	Acres.	Acre-feet.	Number of ditches.	Capacity.	Decree.	Acres.	Acre-feet.
.....	25	237	108.18	3,700	7,400	25	237	108.18	3,500	5,250
.....	25	171	94.12	3,200	6,400	25	171	94.12	3,000	4,500
.....	25	324	113.80	3,880	7,760	25	324	113.80	3,650	5,475
.....	25	211	54.92	1,870	3,740	25	211	54.92	1,760	2,640
.....	25	134	44.30	1,500	3,000	25	134	44.30	1,410	2,115
.....	25	226	62.44	2,130	4,260	25	226	62.44	2,000	3,000
.....	25	159	68.40	2,350	4,700	25	159	68.40	2,200	3,300
.....	9	47	15.60	530	1,060	9	47	15.60	500	750
tal..	184	1,509	561.76	19,160	38,320	184	1,509	561.76	18,020	27,080

	1895.					1896.				
t.	Number of ditches.	Capacity.	Decree.	Acres.	Acre-feet.	Number of ditches.	Capacity.	Decree.	Acres.	Acre-feet.
.....	25	237	108.18	3,240	9,720	25	237	108.18	3,880	3,105
.....	25	171	94.12	2,820	8,460	25	171	94.12	3,380	2,705
.....	25	324	113.80	3,420	10,260	25	324	113.80	4,100	3,280
.....	25	211	54.92	1,650	4,950	25	211	54.92	1,980	1,585
.....	25	134	44.30	1,330	3,990	25	134	44.30	1,600	1,280
.....	25	226	62.44	1,870	5,610	25	226	62.44	2,245	1,795
.....	25	159	68.40	2,050	6,150	25	159	68.40	2,460	1,970
.....	9	47	15.60	470	1,410	9	47	15.60	560	450
tal..	184	1,509	561.76	16,850	50,550	184	1,509	561.76	20,205	16,170

Summary—District No. 27, Colorado.

Year.	Sheet No. 1.					Sheet No. 2.					Total for distr			
	Number of ditches.	Capacity.	Decrees.	Acres.	Acre-feet.	Number of ditches.	Capacity.	Decrees.	Acres.	Acre-feet.	Number of ditches.	Capacity.	Decrees.	Acres.
Prior to 1880	25	115	25.00	2,000	8,000	17	41	14.15	1,285	5,140	42	156	39.15	3,2
1880	25	115	25.00	2,000	8,000	24	58	22.42	2,000	8,000	49	173	47.42	4,0
1881	25	115	25.00	2,000	8,000	24	58	22.42	2,000	8,000	49	173	47.42	4,0
1882	25	115	25.00	2,000	8,000	24	58	22.42	2,000	8,000	49	173	47.42	4,0
1883	25	115	25.00	2,000	8,000	24	58	22.42	2,000	8,000	49	173	47.42	4,0
1884	25	115	25.00	2,000	8,000	24	58	22.42	2,000	8,000	49	173	47.42	4,0
1885	25	115	25.00	2,000	8,000	24	58	22.42	2,000	8,000	49	173	47.42	4,0
1886	25	115	25.00	2,000	8,000	24	58	22.42	2,000	8,000	49	173	47.42	4,0
1887	25	115	25.00	2,000	8,000	24	58	22.42	2,000	8,000	49	173	47.42	4,0
1888	25	115	25.00	2,000	8,000	24	58	22.42	2,600	8,000	49	173	47.42	4,0
1889	25	115	25.00	2,000	8,000	24	58	22.42	2,000	8,000	49	173	47.42	4,0
1890	25	115	25.00	2,000	6,000	24	58	22.42	2,000	6,000	49	173	47.42	4,0
1891	25	115	25.00	2,000	6,000	24	58	22.42	2,000	6,000	49	173	47.42	4,0
1892	25	115	25.00	2,000	6,000	24	58	22.42	2,000	6,000	49	173	47.42	4,0
1893	25	115	25.00	2,000	6,000	24	58	22.42	2,000	6,000	49	173	47.42	4,0
1894	25	115	25.00	2,000	5,000	24	58	22.42	2,000	5,000	49	173	47.42	4,0
1895	25	115	25.00	2,000	8,000	24	58	22.42	2,040	8,160	49	173	47.42	4,0
1896	25	115	25.00	1,345	3,210	24	58	22.42	1,325	3,530	49	173	47.42	2,6

Summary—District No. 35, Colorado.

[There are no decrees in this district.]

Year.	Sheet No. 1.				Sheet No. 2.				Total for dist		
	Number of ditches.	Capacity.	Acres.	Acre-feet.	Number of ditches	Capacity.	Acres.	Acre-feet.	Number of ditches.	Capacity.	Acres.
Prior to 1880	17	38	1,080	4,320	19	82	1,560	6,240	36	120	2,64
1880	17	38	1,080	4,320	19	82	1,560	6,240	36	120	2,64
1881	17	38	1,080	4,320	19	82	1,560	6,240	36	120	2,64
1882	17	38	1,080	4,320	19	82	1,560	6,240	36	120	2,64
1883	17	38	1,080	4,320	19	82	1,560	6,240	36	120	2,64
1884	18	40	1,110	4,440	19	82	1,560	6,240	37	122	2,67
1885	18	40	1,110	4,440	19	82	1,560	6,240	37	122	2,67
1886	20	44	1,330	5,320	19	82	1,560	6,240	39	126	2,89
1887	20	44	1,330	5,320	19	82	1,560	6,240	39	126	2,89
1888	21	144	2,180	8,720	20	182	1,860	7,440	41	326	4,04
1889	25	156	2,500	10,000	22	188	2,020	8,080	47	344	4,52
1890	25	156	2,500	7,500	23	190	2,280	6,840	48	346	4,78
1891	25	156	2,500	7,500	23	190	2,280	6,840	48	346	4,78
1892	25	156	2,500	7,500	23	190	2,280	6,840	48	346	4,78
1893	25	156	2,500	7,500	23	190	2,280	6,840	48	346	4,78
1894	25	156	2,500	6,250	23	190	2,280	5,700	48	346	4,78
1895	25	156	2,350	8,400	23	190	2,080	6,620	48	346	4,43
1896	25	156	2,200	5,750	23	190	1,980	4,660	48	346	4,18

No.	Name.	Stream.	Date of first use.	Decree.	Possible acreage.	Capacity.	1895. Days.	1895. Per day.	1895. Acres.	1896. Days.	1896. Per day.	1896. Acre-feet.	1896. Acres.	Remarks.
1	Sylvia	Rio Grande	1866, 1870, 1874, 1883.	19.00	1,000	25	150	10	600	150	20	2,080	520	1866, 3; 1870, 11; 1874, 2.80; 1883, 2.20.
2	tene	do	1866, 1873, 1874, 1876, 1882.	14.54	1,000	8			440	160	4	1,280	400	1866, 0.74; 1873, 5.80; 1874, 1.60; 1876, 3.80; 1882, 3.20.
3	San Jose or Lucero	do	1866, 1883	9.50	500	7			265	100	4	800	240	1866, 0.90; 1883, 3.60.
4	Montoya No. 1	Pinos Creek	1867, 1879, 1881.	7.00	350	7			190			700	175	1867, 3.80; 1879, 2.40; 1881, 0.80.
5	Montoya No. 3	do	1870	.90	45	1			30			50	25	
6	Montoya No. 4	do	1870	1.00	50	1			25			60	30	
7	Rio Grande No. 1	Rio Grande	1871	12.80	1,000	18			580	150	5	1,500	520	
8	Mexican	Pinos Creek	1871, 1874, 1886.	3.70	185	4			105			190	95	1871, 1.70; 1874, 0.50; 1886, 1.50.
9	James McLeary	San Francisco Creek.	1872	2.00	100	4			70			120	60	
10	McDonald	Rio Grande	1872, 1873	23.40	1,500	20			825	60	12	1,440	750	1872, 12.80; 1873, 9.60.
11	College	San Francisco Creek.	1872	1.50	75	2			45			80	40	
12	Cochrane Pioneer	Rio Grande	1872	4.20	800	10			600	160	4	1,280	550	
13	Homer	do	1873, 1874, 1876, 1880.	22.53	500	12			385	130	6	1,560	350	1873, 2.20; 1874, 4.40; 1876, 3.20; 1880, 7.73.
14	Dyer	do	1873, 1874, 1876, 1880.	1.00	50	2			35			90	30	
15	San Francisco Overflow.	San Francisco Creek.	1873, 1874, 1876, 1880.	1.60	80	2			35			60	30	
16	Valdez No. 2	do	1873, 1874, 1876, 1880.	1.20	60	2			40			70	35	
17	Pace	Rio Grande	1873, 1874, 1876, 1880.	1.40	500	5			200	160	2.5	720	180	
18	Martinez	San Francisco Creek.	1873, 1874, 1876, 1880.	2.40	120	4			80			140	70	
19	Valdez No. 1	do	1873, 1874, 1876, 1880.	3.10	165	4			110			200	100	
20	Robran	Pinos Creek	1873, 1874, 1876, 1880.	4.60	230	9			130			240	120	
21	Jemison No. 6	do	1873, 1874, 1876, 1880.	.70	35	1			25			40	20	
22	Jemison No. 4	do	1873, 1874, 1876, 1880.	1.00	50	1			30			50	25	
23	Beran No. 6	do	1873, 1874, 1876, 1880.	.66	35	1			25			40	20	
24	Lavalto	San Francisco Creek.	1874	1.00	50	2			35			60	30	
25	Schrader, No. 1	Schrader Creek	1874	1.60	80	2			55			150	50	
26	Jemison & Beran No. 2.	Pinos Creek	1874	2.20	110	3			55			100	50	

List of ditches in District No. 20, Colorado—Continued.

No.	Name.	Stream.	Date of first use.	Decree.	Possible acreage.	Capacity.	1895.			1896.				Remarks.
							Days.	Per day	Acres.	Days.	Per day.	Acre-feet.	Acres.	
27	Loma	Rio Grande	1874, 1881	8.00	400	8			220			800	200	1874, 2; 1881, 6.
28	Pinos Creek No. 1	Pinos Creek	1874	13.40	670	20			360			650	325	
29	Hubbard No. 2, overflow.	Rio Grande	1874	1.00	50	2			35			120	30	
30	Hubbard	do	1874	1.60	200	2			200	160	3	720	180	
31	Centennial	do	1874, 1875, 1876, 1879, 1880, 1881, 1882, 1883.	82.97	3,000	152	180	75	3,000	130	45	9,600	2,400	1874, 35.80; 1875, 4.10; 1876, 7.60; 1879, 19.37; 1880, 10.40; 1881, 2.60; 1882, 1.50; 1883, 1.60.
32	Schroder No. 2	Schroder Creek	1874	1.60	80	3			55			150	50	
33	Fish	Rio Grande	1874, 1881	18.60	2,000	25			560	150	6	1,800	510	1874, 3; 1881, 15.60.
34	Alder Creek No. 1	Alder Creek	1874	2.00	150	3			150			510	140	
35	Kane & Collan	Rio Grande	1874, 1880, 1886.	8.20	1,000	6			510	150	4	1,200	470	1874, 1.60; 1880, 4; 1886, 2.60.
36	Larick No. 5	Rock Creek	1874	2.60	130	3			100			65	80	
37	Butler irrigating	Rio Grande	1874, 1882	8.80	500	6			220	135	5	800	200	1874, 4; 1882, 4.80.
38	Rienan No. 2	San Francisco Creek.	1874	1.00	50	2			35			60	30	
39	Rienan No. 1	do	1874	1.00	50	1			35			60	30	
40	Jemison No. 9	Pinos Creek	1874	.70	35	1			15			30	15	
41	Alder Creek No. 2	Alder Creek	1874	2.00	150	3			150			510	140	
42	Jemison No. 7	Pinos Creek	1874	.80	40	1			25			40	20	
43	Burns, Larsen & Kiel	San Francisco Creek.	1874	1.00	50	1			35			60	30	
44	Jemison No. 5	Pinos Creek	1874	.54	25	1			10			20	10	
45	Jemison No. 8	do	1874	.74	35	2			20			30	15	
46	Larick No. 4	Rock Creek	1874	2.60	130	3			75			80	65	
47	Dupke No. 2	do	1874	1.30	60	2			40			45	35	
48	Dupke No. 3	do	1874	1.24	60	2			35			40	30	
49	Dupke No. 4	do	1874	2.08	100	2			60			60	50	
50	Dupke No. 6	do	1874	1.00	50	1			30			30	25	
51	Dupke, No. 5	Rock Creek	1874	2.08	100	2			60			60	50	
52	Burns	San Francisco Creek.	1874	2.00	100	2			65			120	60	
53	Anderson	Rio Grande	1874, 1875, 1876	21.10	800	30	150	9	300	150	9	1,200	300	1874, 3.20; 1875, 8.30; 1876, 9.60.
54	Grubb, No. 2	Bear Creek	1874	1.00	60	2			45			240	40	
55	Shaw, No. 2	Spring Creek	1874	1.20	60	2			40			160	40	
56	Grubb, No. 1	Bear Creek	1874	.80	50	2			35			180	30	
57	Hocker, No. 1	Rock Creek	1874	1.82	90	2			50			55	45	
58	Elliott, No. 1	Pinos Creek	1875	1.50	75	3			40			70	35	
59	Elliott, No. 4	do	1875	2.00	100	3			50			90	45	
60	Elliott, No. 3	do	1875	1.00	50	2			30			50	25	
61	Elliott, No. 2	do	1875	1.00	50	2			30			50	25	
62	Elliott, No. 5	do	1875	1.00	50	2			30			50	25	
63	Jemison, No. 2	do	1875	.80	40	1			25			40	20	

65	Meadow Overflow	Rio Grande	1875	1.00	50	2		25			40	20	[illegible]
66	Poole-Jemison	Pinos Creek	1875	1.00	50	2		25			40	20	
67	Poole-Meadow	do	1875	1.00	50	2		25			40	20	
68	Lease, Davis & Bingle.	Rio Grande	1875, 1881	10.34	500	6		200			360	180	1875, 6.08; 1881, 4.26.
69	Ewing, No. 2	Embargo Creek	1875	1.40	60	4		30			120	25	
70	Raber	Rio Grande	1875	2.80	140	5		85			240	80	
71	San Luis Valley Irrigating.	do	1875, 1883	24.00	1,000	25		530			960	480	1875, 8.40; 1883, 15.60.
72	Chadwick, No. 1	Willow Creek	1875	2.00	100	2		65			180	60	
73	Poole Fairchild	Pinos Creek	1875	1.80	90	2		45			80	40	
74	Hocker, No. 2	Rock Creek	1875	2.08	100	2		60			60	50	
75	Smith, No. 4	do	1875	.52	20	1		20			20	15	
76	Jemison, No. 1	Pinos Creek	1875	.74	35	1		20			30	15	
77	Ewing No. 3	Embargo Creek	1875	2.00	90	3		50			180	45	
78	Off	Rio Grande	1875	8.40	550	10		495	160	7	1,800	450	
79	Rough and Ready	Rock Creek	1875, 1876, 1886	34.37	1,500	21		900			725	765	1875, 16.67; 1876, 16.66; 1886, 1.04.
80	McIntosh Arroyo	Rio Grande	1875, 1881, 1892	6.40	500	6		375	140	3	840	340	1875, 3.80; 1881, 1.20; 1892, 1.40.
81	McDonald & Gleason	Rock Creek	1875	10.29	400	10		240			220	200	
82	Larick No. 7	do	1875	1.00	50	1		25			25	20	
83	Jarnel	Pinos Creek	1875, 1892	8.00	400	10		210			380	190	1875, 6; 1892, 2.
84	Larick No 8	Rock Creek	1875	.68	30	1		25			20	15	
85	Larick No. 6	do	1875	.76	35	1		20			20	15	
86	Smith No. 3	do	1875	1.00	50	1		25			25	20	
87	Cadle No. 1	do	1875	1.50	75	5		40			40	35	
88	Hanna No. 1	Pinos Creek	1875	.70	35	1		20			30	15	
89	Beran No. 2	do	1875	.70	35	1		15			30	15	
90	Ewing No. 1	Embargo Creek	1875	.80	30	1		20			60	15	
91	Hanna No. 2	Pinos Creek	1875	1.00	50	1		25			40	20	
92	Little Anna	do	1875, 1883, 1892	2.80	140	3		70			130	65	1875, 1; 1883, 0.60; 1892, 1.20.
93	Beran No. 3	do	1875	1.00	50	2		25			40	20	
94	Poole-Brush	do	1875	.90	45	1		25			40	20	
95	Poole-Bochle	do	1875	.70	35	1		15			30	15	
96	O'Connell	do	1876, 1886	1.70	85	2		45			80	40	1876, 1; 1886, 0.70.
97	Chadwick No. 4	Willow Creek	1876	1.40	70	3		35			90	30	
98	Embargo	Embargo Creek	1876, 1880, 1886	6.70	250	12		145			520	130	1876, 3.50; 1880, 1.60; 1886, 1.60.
99	Elliott & Beran	Pinos Creek	1876	1.00	50	2		25			40	20	
100	Independent No. 2	Rio Grande	1876, 1879	30.40	1,200	50		880	160	10	3,200	800	1876, 25.60; 1879, 4.80.
101	High-water	do	1876	2.00	100	2		55			100	50	
102	Bishop & Lavick	Rock Creek	1876	2.60	130	2		70			50	60	
103	Beran No. 5	Pinos Creek	1876	1.20	60	2		30			40	25	
104	Fairchild No. 2	do	1876	.90	45	1		25			30	20	
105	Barklay	do	1876	1.50	75	2		35			55	35	
106	Bennett No. 1	do	1876	1.20	60	1		30			40	25	
107	Bennett Creek	Bennett Creek	1876	1.00	50	1		20			45	15	
108	Norris	Pinos Creek	1876	.90	45	1		25			30	20	
109	Beran No. 4	do	1876	.80	40	1		25			30	20	
	San Francisco	San Francisco Creek	1876, 1882	7.00	350	6		220			400	200	1876, 1; 1882, 6.

List of ditches in District No. 20, Colorado—Continued.

No.	Name.	Stream.	Date of first use.	Decree.	Possible acreage.	Capacity.	1895.			1896.				Remarks.
							Days.	Per day.	Acres.	Days.	Per day.	Acre-feet.	Acres.	
110	Bennett No. 2	Pinos Creek	1876	1.00	50	1			25			30	20	
111	Tryon	Rock Creek	1876	6.25	300	6			150			140	125	
112	Fairchild No. 1	Pinos Creek	1876	1.00	50	1			25			30	20	
113	Little Danube	do	1876, 1888, 1892	5.60	280	10			145			195	130	1876, 2.50; 1888, 0.80; 1892, 2.30.
114	Kiel & Larsen	San Francisco Creek	1876	1.00	50	1			35			60	30	
115	Phillips No. 1	Elk Creek	1876	1.20	60	2			40			105	35	
116	Chadwick No. 2	Willow Creek	1876	1.00	50	1			35			90	30	
117	Chadwick No. 3	do	1876	2.00	100	2			60			165	55	
118	Todd	Cherry Creek	1876	.90	45	1			35			90	30	
119	Phillips No. 2	Elk Creek	1876	1.00	50	1			35			90	30	
120	Town of Del Norte	Rio Grande	1876	9.20	460	10			400			1,060	360	
121	Ward No. 1	San Francisco Creek	1877	1.60	80	2			50			90	45	
122	Ward No. 3	do	1877	1.00	50	1			35			60	30	
123	Cochran Bros. No. 1	do	1877	2.30	115	5			70			190	65	
124	Cochran Bros. No. 2	do	1877	3.00	150	4			100			180	90	
125	Ward No. 2	do	1877	1.00	50	1			35			60	30	
126	Bochle	Pinos Creek	1877	.86	45	1			25			30	20	
127	Wolf Creek, No. 2	Wolf Creek	1877	4.00	200	4			95			340	85	
128	Wolf Creek, No. 1	do	1877	4.00	250	4			95			340	85	
129	Smith, No. 2	Rock Creek	1877	1.82	100	2			40			40	35	
130	Ewing, No. 4	Embargo Creek	1877	2.00	80	3			45			160	40	
131	James Peterson	Rio Grande	1877, 1892	4.80	200	4			155	150	2	560	140	1877, 3.60; 1892, 1.20.
132	Smith, No. 1	Rock Creek	1877	1.00	50	1			25			25	20	
133	Jemison & Beran, No. 1.	Pinos Creek	1877	1.00	50	1			25			30	20	
134	Jemison, No. 3	do	1877	.90	45	1			15			20	15	
135	Alencio, No. 2	Rio Grande	1877	4.00	200	10			175			480	160	
136	Mill	Rock Creek	1877	2.60	130	3			60			55	50	
137	Rio Grande and Piedra Valley.	Rio Grande	1877, 1880, 1881, 1883, 1884, 1886, 1887, 1888, 1889, 1890.	76.45	5,000	90	131	75	2,000	160	45	8,400	2,100	1877, 16.60; 1880, 25.80; 1881, 4.00; 1883, 2.50; 1884, 2.40; 1886, 6.70; 1887, 2.80; 1888, 3.25; 1889, 6.70; 1890, 5.70.
138	MacLeod, No. 5	San Francisco Creek	1878	1.00	50	2			30			50	25	
139	Shaw, No. 1	Spring Creek	1878	4.00	200	5			140			560	140	
140	Shaw, No. 3	do	1878	1.20	60	1			40			160	40	
141	MacLeod, No. 1	San Francisco Creek	1878	1.00	50	2			30			50	25	
142	Larick, No. 9	Rock Creek	1878	.80	40	1			20			15	15	
143	Hellman & Larick	do	1878	1.00	50	1			20			15	15	
144	Compos	Willow Creek	1878	.80	40	1			25			60	20	1895, 4.17;

151	Larick, No. 3	Rock Creek	1878	.70	30	1			10			10	10	
152	Beran No. 1	Pinos Creek	1878	3.20	160	4			75			100	70	
153	Excelsior	Rio Grande	1879, 1881, 1884 1886, 1887, 1888, 1889, 1890.	93.76	5,000	150	194	50	3,500	160	50	12,000	8,000	1879, 45.70; 1881, 13.70; 1884, 11.60; 1886, 4.50; 1887, 0.66; 1888, 9.10; 1889, 2; 1890, 6.50.
154	Pfeiffer	do	1879, 1887	6.40	640	8			365	130	4	1,040	330	1879, 3.20; 1887, 3.20.
155	West Side	do	1879, 1882	12.40	3,000	18	194	25	1,500	100	10	2,000	1,000	1879, 2.40; 1882, 10.
156	Independent	do	1879	12.00	1,000	15			880	120	10	2,400	800	
157	Ward No. 4	San Francisco Creek	1879, 1881	2.10	105	1			55			100	50	1879, 1; 1881, 1.10.
158	Wassen	Willow Creek	1879	7.00	350	10			200			540	180	
159	Wm. Peochy	Rock Creek	1879	4.17	200	5			70			60	60	
160	Charlesworth No. 1	Embargo Creek	1879	1.00	40	1			25			80	20	
161	Breen	do	1879	.90	40	1			25			80	20	
162	Rio Grande	Rio Grande	1879, 1881	28.40	3,000	30			2,750	120	26	6,240	2,500	1879, 23.20; 1881, 3.20.
163	Star	do	1880	12.57	600	15			550	100	5	1,000	500	
164	Ehrowitz	do	1880	1.00	80	3			50			135	45	
165	Hermenthol	do	1880	2.80										Included in totals of Rio Grande Canal.
166	Park & Green	do	1880, 1881	6.60	330	10			140			375	125	1880, 3.40; 1881, 3.20.
167	Kiel & Larsen Spring	Spring Creek	1880	1.00	50	1			35			140	35	
168	D. H. Dunn	Rio Grande	1880, 1881	17.60										1880, 11.20; 1881, 6.40; included in totals of Rio Grande Canal.
169	Scuch & Schmidt	do	1880, 1882, 1888	7.90										Included in totals of Rio Grande Canal; 1880, 2.50; 1882, 2.20; 1888, 3.20.
170	Rock Creek, Anderson & Co.	Rock Creek	1880, 1886, 1892	11.42	500	2			200			150	170	1880, 1; 1886, 4.17; 1892, 6.25.
171	Cadle No. 3	do	1880	1.82	80	2			35			30	30	
172	Bochman No. 1	Embargo Creek	1880	1.00	40	1			25			100	20	
173	Cole No. 2 and extension.	Rock Creek	1880	5.20	200	3			90			70	75	
174	Henderson overflow	Rio Grande	1880	2.20	110	3			65			180	60	
175	Alder Creek No. 3	Alder Creek	1880	4.00	300	4			295			900	270	
176	Charlesworth, No. 2	Embargo Creek	1880	1.00	50	1			35			120	30	
177	Deekman No. 1	Spring Creek	1880	.90	50	1			30			120	30	
178	Bauer	Rio Grande	1880	8.40	400	15			25			60	20	
179	Schacherl	do	1880, 1881	3.20	160	5			100			270	90	1880, 1.20; 1881, 2.
180	Colo No. 1 and extension.	Rock Creek	1880, 1885, 1889	6.36	300	5			115			80	95	1880, .90; 1886, 1.56; 1889, 3.90.
181	Minor	Rio Grande	1880, 1889	15.60	800	20			475	140	5	1,400	430	1880, 1.60; 1889, 14.
182	Nichol	do	1880	8.00	300	10			265	160	3	960	240	
183	John Anderson	do	1881	3.20	200	5			200	160	2	640	180	
184	Biedell	do	1881	20.00										Included in totals of Rio Grande Canal.

List of ditches in District No. 20, Colorado—Continued.

No.	Name.	Stream.	Date of first use.	Decree.	Possible acreage.	Capacity.	1895. Days.	1895. Per day.	1895. Acres.	1896. Days.	1896. Per day.	1896. Acre-feet.	1896. Acres.	Remarks.
185	Mike White	Rio Grande	1881	13.20										Included in totals of Rio Grande Canal.
186	Rio Grande No. 2	do	1881	3.20	500	5			230	100	3	600	210	
187	Bachman No. 2	Embargo Creek	1881	3.20	130	3			75			280	70	
188	Rio Grande and San Luis.	Rio Grande	1881	21.60	1,000	25			570	160	4	1,280	520	
189	Daries No. 2	Embargo Creek	1881	2.00	80	2			50			180	45	
190	Cadee No. 1	Rock Creek	1881	1.50	75	3			25			20	20	
191	Ladd	Embargo Creek	1881	.90	35	1			25			80	20	
192	Bieger	do	1881, 1888	1.80	70	2			45			160	40	1881, 1; 1888, 0.80.
193	Bachman and Seitz	do	1881, 1883	2.00	80	3			50			180	45	1881, 1; 1883, 1.
194	Deekman No. 2	Spring Creek	1881	.90	50	1			35			120	30	
195	Montoya No. 5	Pinos Creek	1881	1.00	50	2			25			20	20	
196	Seitz	Embargo Creek	1881	1.00	40	3			25			80	20	
197	Church	Rio Grande	1881, 1889	1.02	175	2			80	150	2	300	75	1881, 1; 1889, 0.02.
198	Rio Grande Canal	do	1882, 1885, 1886, 1887, 1888, 1889, 1890, 1891, 1892.	1,050.60	60,000	1,500	180	340	36,000	90	240	43.200	30,340	1882, 515.40; 1885, 22.80; 1886, 22.80; 1887, 26; 1888, 33.60; 1889, 41; 1890, 43.40; 1891, 52; 1892, 293.70.
199	John Nelson	do	1882	8.00	1,000	12	120	10	700	100	7	1,400	675	1882, 31.16; 1884, 7.20.
200	Rio Grande and Larlet.	do	1882, 1884, 1885, 1886, 1887, 1888, 1890.	91.66	4.000	55	150	50	3,800	150	50	13,200	3,300	1885, 11.20; 1886, 4.30; 1887, 2.60; 1888, 3.50 1890, 31.70.
201	Marajo	Rio Grande	1882	4.80	300	19			165	100	2	400	150	
202	Poole-Mesa	Pinos Creek	1882	1.00	50	2			25			20	20	
203	MacLeod No. 2	San Francisco Creek	1882	1.00	50	1			25			40	20	
204	Monte Vista Canal	Rio Grande	1882, 1886, 1887, 1888, 1889, 1890.	441.74	45,000	650	172	320	10,500	100	100	20,000	8,645	1882, 92.70; 1886, 7.24; 1887, 30.80; 1888, 247.60; 1889, 14.20; 1890, 49.20.
205	Kernan	Pinos Creek	1882	.70	35	2			20			15	15	
206	MacLeod No. 4	San Francisco Creek	1882	.70	35	1			20			30	15	
207	Sprague	Pinos Creek	1882	.80	40	1			20			15	15	
208	MacLeod No. 3	San Francisco Creek	1882	1.00	50	1			25			40	20	
209	MacLeod No. 5	do	1882	1.00	50	1			25			40	20	
210	Cole No. 6	Rock Creek	1882	.70	30	1			10			10	10	
211	Hillsdale	Rio Grande	1882	1.60	80	2			50			135	45	
212	Cemetery	San Francisco Creek	1883, 1885	1.50	75	2			40			70	35	1883, 0.30; 1886, 1.20.
213	Dunning Mill	Rio Grande	1882	.60										Included in totals of Rio Grande Canal.
214	Empire Canal	do	1883, 1887, 1888, 1890, 1891.	864.18	50,000	1,000	184	350	10,000	50	100	10,000	7,450	1883, 374.80; 1887, 6; 1888, 17.90; 1890, 436.48; 1891,

219	Sherman North	Spring Creek	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]			[illegible]	[illegible]	
220	Fuchs	Pinos Creek	1883	2.20	110	13			50			45	45	
221	Extension of Smith	Rock Creek	1883	4.17	200	8			75			50	60	
222	Cole No. 5	do	1883	.65	30	1			15			10	10	
223	Cole No. 4	do	1883	.60	30	1			15			10	10	
224	Knoblauch	Rio Grande	1884	1.20	60	2			40			105	35	
225	San Luis Valley	do	1884, 1888, 1889, 1891, 1892.	416.30	40,000	275	184	250	10,000	100	90	18,000	7,500	1884, 50.30; 1888, 85.90; 1889, 162.70; 1891, 6.50; 1892, 110.90.
226	Hickory Jackson	Rio Grande	1884, 1890	36.00	3,000	29	160	50	1,700	40	20	1,600	1,500	1884, 19; 1890, 17.
227	Spring Creek No. 1	Spring Creek	1884, 1888	12.80	700	10			450			1,350	450	1884, 6.40; 1888, 6.40.
228	Dupke No. 1	Rock Creek	1884	1.04	50	1			15			10	10	
229	Kiel, Larsen & Gardner.	San Francisco Creek	1884	1.30	65	2			35			60	30	
230	Barricklow	Pinos Creek	1884	1.00	50	2			25			20	20	
231	Shotwell	Rock Creek	1884	2.08	100	2			25			20	20	
232	Ryan	Cat Creek	1884	1.60	100	2			50			180	45	
233	Arroyo, from Rock Creek.	Rock Creek	1885	7.80	300	10			90			70	75	
234	Clover Leaf	do	1885	2.08	100	3			25			20	20	
235	Meadow Glen	Rio Grande	1885	25.00	1,500	30			825	100	10	2,000	750	
236	Billings	do	1885	36.54	1,000	20			700	100	6	1,200	630	
237	Hall	do	1885	1.00	50	13			35			90	30	
238	Cleghorn	do	1885	1.00	175	1			125	150	2	460	115	
239	Costella	do	1886, 1890	227.50	4,000	180			1,260	90	40	4,200	1,050	1886, 172.80; 1890, 54.70.
240	Brook Farm	Rock Creek	1886	5.72	250	3			70			50	55	
241	Rio Grande No. 4	Rio Grande	1886	12.00	600	20			330			900	300	
242	Grubb No. 3	Bear Creek	1886	1.00	60	1			45			160	40	
243	Meadow	Spring Creek	1886, 1887	4.26	250	6			140			420	140	1886, 3.06; 1887, 1.20.
244	Cooley & Stannart	do	1886, 1887	17.00	900	10			600			1,800	600	1886, 3.20; 1887, 14.80.
245	South Fork Highline	Rio Grande	1886	17.60	1,000	30			515	150	12	1,880	470	
246	Hasselkuss	do	1886	2.40	500	25			330	90	4	720	300	
247	Dietrich & La Cass	do	1887	12.80	290	6			190			910	170	
248	Cochran Bros. No. 3.	San Francisco Creek	1887	2.00	100	3			55			75	50	
249	Prairie	Rio Grande	1887, 1890	235.00	5,500	275			5,500			11,000	5,500	1887, 192; 1890, 43.
250	Myers	Embargo Creek	1887	1.30	50	2			35			120	30	
251	Star Enlargement Co.'s.	Rio Grande	1887	88.10	1,500	10	150	10	700	100	5	1,000	630	
252	Ryan, No. 2	Cat Creek	1887	1.60	100	3			35			190	30	
253	Howlett	Pinos Creek	1887	1.20	60	1			25			20	20	
254	Farmers' Union	Rio Grande	1888, 1889	544.50	60,000	325	160	350	41,000	60	175	21,000	34,755	1888, 267.20; 1889, 277.30.
255	Spruce Lawn	Spring Creek	1888	16.30	850	1			560			1,680	560	
256	Spring Ranch	Rio Grande	1888	9.60	480	1			35			90	30	
257	Murray	Dry Creek	1888	6.40	320	2			25			60	20	
258	Eagle	Rock Creek	1888	6.25	300	3			80			55	65	
259	Swartz	do	1888	3.64	150	1			40			30	35	

List of ditches in District No. 20, Colorado—Continued.

No.	Name.	Stream.	Date of first use.	Decree.	Possible acreage.	Capacity.	1895.			1896.				Remarks.
							Days.	Per day.	Acres.	Days.	Per day.	Acre-feet.	Acres.	
260	Perkins	Pinos Creek	1888	5.60	280	5			145			130	130	
261	Bennett, No. 3	Cherry Creek	1888	.80	40	2			25			60	20	
262	Cole, No. 3	Rock Creek	1888	.76	30	2			15			10	10	
263	Newton	do	1888	10.00	400	8			125			90	100	
264	Spring Branch	Spring Branch Creek	1888	.90	40	1			30			75	25	
265	Kenelworth	Rio Grande	1888	197.05	10,000	100	180	100	650	30	20	1,200	550	
266	Brey	do	1889	1.00	100	11			60	120	3	220	55	
	Total			5,561.76	232,520	6,034			164,795			257,270	139,795	

List of ditches in Rio Grande [illegible]—Continued.

No.	Name.	Stream.	Date of first use.	Decree.	Possible acreage.	Capacity.	1895. Days.	1895. Per day.	1895. Acre-feet.	1895. Acres.	1896. Days.	1896. Per day.	1896. Acre-feet.	1896. Acres.	Remarks.
1	El Viejo	Alamoso River	1868	19.20	660	9	180	9	1,600	400	80	10	1,440	360	
2	Gomez	do	1868	4.62	90	4	180	3	400	100	80	2	320	90	
3	Molino	do	1869	6.93	70	4	180	3	80	20	80	2	80	20	
4	Housen La Jara Overflow No. 3.	La Jara River	1870	21.28	1,350	11	150	10	3,000	1,330	80	8	1,280	1,220	
5	Swamp	do	1870	2.49	1,000	3	150	2	600	980	80	2	320	890	
6	Garcia No. 1	do	1870	4.62	260	4	150	2	520	130	80	2	320	120	
7	McCunniff	do	1870	16.60	300	8	125	8	1,000	250	60	6.5	780	230	
8	Jose Voldez	Alamoso River	1870	16.50	200	8	180	8	320	80	70	5.5	280	70	
9	Voldez	do	1870, 1887	86.63	1,550	7	125	7	1,750	450	65	7	910	405	1870, 14; 1887, 72.63.
10	Copulen	do	1870	31.37	800	15	180	15	3,200	800	60	8	960	720	
11	Gabino Gallegos	do	1870	16.00	400	10	130	10	740	185	60	6	680	170	
12	Volley	La Jara River	1870	21.02	400	6	125	6	1,400	350	55	2.5	275	320	
13	Garcia No. 2	Alamoso River	1871	5.54	120	4	125	3	220	55	40	3.5	210	50	
14	San Jose No. 2	do	1871	3.08	50	3	150	2	200	50	40	3	200	50	
15	Cristobal Revera	do	1873	10.08	320	6	150	6	240	60	30	4.5	200	50	
16	Jose E. Atensio	Hot Creek	1873	6.93	150	6	100	3	600	145	45	3	270	130	
17	San Jose No. 1	Alamoso River	1873	10.39	190	8	125	4	640	160	35	3.5	245	145	
18	Romero	La Jara River	1873	7.68	100	5	100	4	400	100	65	2	260	100	
19	Gallegos No. 4	Hot Creek	1873	12.32	160	5	100	5	320	80	40	2	300	75	
20	Gallegos No. 2	La Jara River	1873	11.08	160	6	90	6	600	150	30	2.5	150	135	
21	Juan de Dios Vigil	Hot Creek	1873	11.08	90	5	90	5	280	70	35	2	140	65	
22	Gallegos No. 1	do	1873	11.08	230	8	90	8	620	155	45	3.5	315	140	
23	Newcomb Bros	La Jara River	1873, 1877	18.68	600	6	90	6	1,080	450	30	6	360	410	1873, 11.52; 1877, 7.16.
24	Romaldo Voldez	Alamoso River	1873	4.62	70	4	100	2	240	60	30	2.5	150	50	
25	Le-Mita No. 1	La Jara River	1874	6.93	60	5	90	3	180	45	35	3	160	40	
26	Ramona	Alamoso River	1874	9.85	160	7	125	4	280	70	30	5	220	55	
27	Head Overflow No. 5.	do	1874	49.80	2,600	20	90	20	3,600	2,600	29	8	465	2,520	2,000 gross, 500 seepage.
28	Le Mita No. 3	Hot Creek	1874	6.16	100	4	90	3	240	60	29	2.5	145	45	
29	Alamoso and Spring Creek.	Alamoso River	1875, 1877, 1880, 1887.	62.74	1,600	55	125	20	5,000	860	30	12	720	770	1875, 5.76; 1877, 18.14; 1880, 12.62; 1887, 26.22.
30	Garden	Spring Creek	1875	8.10	80	4	50	2	200	50	30	3	180	50	
31	Agua Caliente	Hot Creek	1875	15.40	190	8	90	4	280	70	28	2	110	60	
32	Ortez	Alamoso River	1875	14.02	320	10	100	10	920	230	35	4	280	200	
33	Eakridge Spring Creek.	Spring Creek	1875	3.36	260	2	20	1	40	180	35	2	140	160	
33	Sanchez No. 1	Hot Creek	1875	6.93	60	4	80	3	140	35	35	1.5	105	30	
34	Sanchez No. 2	do	1875	6.93	20	4	80	1	60	15	35	1.5	40	10	
35	Arroyo	Alamoso River	1875	53.12	800	25	90	25	3,200	800	30	10	600	715	
36	T. K. Walsh	do	1876	6.93	100	4	50	2.5	250	90	30	3.5	210	80	
37	Union	do	1876, 1882, 1884, 1887.	262.64	4,000	50	150	50	11,200	2,800	35	15	1,050	2,580	1876, 14.13; 1882, 27.21; 1884, 76.30; 1887, 145.00.
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List of ditches in District No. 21, Colorado.

No.	Name.	Stream.	Date of first use.	Decree.	Possible acreage.	Capacity.	1895.				1896.				Remarks.
							Days.	Per day.	Acre-feet.	Acres.	Days.	Per day.	Acre-feet.	Acres.	
39	Lovett	Alamoso River	1876	10.83	150	4	90	3	240	60	30	4	120	50	
40	North Alamoso	do	1877, 1887	49.79	600	11	90	10	1,800	600	30	8	480	590	1877, 22.40; 1887, 27.39.
41	Sanco	La Jara River	1878	9.60	220	6	90	4	720	220	45	4.5	405	195	
42	Cottonwood	Alamoso River	1879	35.70	1,500	25	100	20	4,000	1,200	30	7.5	450	1,060	1879, 8.46; 1880, 5.65; 1887, 21.59.
43	Walsh	do	1880	12.45	85	4	80	4	280	70	30	3.5	210	60	
44	Gallegos No. 3	do	1880	14.94	550	8	90	8	1,440	530	30	2.5	150	480	
45	Peñasco	La Jara River	1880	3.36	30	2	50	1	80	20	35	1.5	60	15	
46	La Piedra	do	1880	4.98	180	4	80	3	400	100	40	2	160	85	
47	Pulo Real	do	1880	7.20	100	5	90	4	320	80	35	2 25	155	70	
48	Thielkeld	Alamoso River	1880	7.68	160	4	50	3	300	100	30	4	240	85	
49	Alamoso No. 1	do	1880, 1887	19.81	1,000	8	60	8	960	800	30	5.5	330	720	1880, 14.52; 1887, 5.29.
50	Eakridge and Garrett.	La Jara River	1880	7.84	500	6	60	5	600	440	30	4	240	395	
	Le Mita No. 2	do	1880	7.20	200	5	80	3	280	70	30	2	120	60	
51	Hardtack	do	1881	18.45	640	10	90	8	1,440	640	28	9.25	520	580	
52	Lowland	do	1881	14.94	1,000	8	80	8	1,280	660	29	4	230	600	
53	Clark	Alamoso River	1881	6.75	300	4	80	4	640	285	27	4	215	260	
54	Alanros	La Jara River	1881	6.93	160	4	80	3	220	55	30	2	120	50	
55	Overflow No. 4	Alamoso River	1881	16.00	800	15	80	15	2,400	800	26	7	365	725	
56	Nate Garrett	La Jara River	1882, 1887	13.45	320	8	100	8	1,280	320	25	3	150	320	1882, 7.80; 1887, 5.65.
57	Lower La Jara	do	1883, 1884, 1887	44.82	3,000	15	80	15	2,400	2,900	27	8	430	2,650	1883, 18.67; 1884, 6.23; 1887, 19.92.
58	Worcester	Alamoso River	1883	11.83	900	8	80	6	960	860	23	5	230	845	
59	Overflow No. 2	do	1884	16.00	1,800	20	80	8	1,280	570	23	5	230	500	
60	Norland	do	1885	48.56	1,200	22	80	15	2,400	825	30	4	240	750	
61	Flintham	do	1885	24.90	500	12	80	10	1,360	340	27	6	325	310	
62	Miller	do	1885, 1887	66.40	3,200	35	125	35	8,400	1,600	30	11	660	1,450	1885, 34.86; 1887, 31.54.
63	Overflow No. 1	do	1886	112.00	4,500	40	80	40	6,400	2,870	26	10	520	2,610	
64	Ed Newcomb	do	1886	13.28	1,000	6	80	6	960	1,000	29	5	290	940	
65	Morganville	do	1886	20.75	1,540	15	125	15	3,750	1,500	26	9	470	1,370	
66	Plano Vista	do	1887	29.81	1,800	14	80	10	1,600	1,700	24	10	480	1,520	
67	Davis-Chapman	do	1887	51.87	2,000	20	50	10	800	200	25	4	200	100	
68	Scandinavian	do	1887	43.58	4,280	30	100	28	5,600	2,000	24	8	385	1,885	
69	Alamoso Creek Canal	do	1888	166.05	7,920	25	90	25	4,500	1,500	28	11	615	1,335	
70	Baker	do	1888	12.45	800	6	80	5	800	800	45	6	540	745	
71	Coddington	La Jara River	1888	29.88	1,000	10	80	9	1,440	900	35	10	700	850	
72	Ribera	Alamoso River	1888	28.80	975	15	80	9	1,200	300	27	5	270	250	
73	Modril														

List of ditches in District No. 22, Colorado.

No.	Name.	Stream.	Date of first use.	Decree.	Possible acreage.	Capacity.	1896. Days.	1896. Per day.	1896. Acre-feet.	1896. Acres.	Remarks.
1	Guadalupe Main	Conejos River	1855	69.82	1,920	32	150	20	6,000	1,760	
2	Head's Mill and Irrigation	do	1855	7.14	200	10			800	200	(Has decree of 170 second-feet for mill.)
3	El Coda	San Antonio River	1856	25.18	1,000	15	150	10	3,000	1,000	
4	Llano	Los Pinos Creek	1856	31.84	1,500	18	150	15	4,500	1,500	
5	Garcia	Conejos River	1856, 1857	12.32	320	6	155	5	1,280	320	1856, 6.23; 1857, 6.09.
6	Serrietta	do	1856, 1887, 1888	39.27	1,760	15	155	12	3,720	980	1856, 31.27; 1887, 4; 1888, 4.
7	Seledonia Voldez M. and I.	do	1856	31.77	280	6	155	5	880	220	
8	Los Pinos	Los Pinos Creek	1856	22.94	700	9	150	5	1,500	675	
9	Solozar	Conejos River	1856	12.32	200	3	130	2	280	70	
10	Mill	do	1856	12.67	200	6	150	4	400	100	
11	San Jose	do	1856	40.28	1,160	18	120	8	1,920	1,045	
12	Sincero	San Antonio River	1856	18.31	1,360	18	70	12	1,680	1,370	
13	Del Fuerticito	Conejos River	1856	8.76	240	3	130	2	520	130	
14	San Rafael and Conejos	do	1856, 1862, 1883	21.62	1,400	12	140	4	640	160	1856, 8.81; 1862, 8.81; 1883, 4.
15	El Senito	do	1856	6.19	280	3	120	2	480	280	
16	Gabriel Martinez	do	1857	.71	180	3	120	2	480	115	
17	Santiago	do	1857	55.59	640	12	120	8	1,920	550	
18	Archuleta & Trujillo, No. 1	do	1857	8.81	120	3	85	2.5	420	240	
19	Archuleta & Trujillo, No. 2	Natural Springs	1857	14.94	100	6	85	2.5	430	200	
20	Overflow	Conejos River	1857	11.79	160	9	100	3	600	160	
21	Trujillo	do	1857	53.48	460	9	95	4	760	465	1857, 29.80; 1863, 23.68.
22	Cañon Irrigating	do	1857	42.89	1,500	8	125	3.5	750	500	
23	La Del Rio	do	1857	31.44	1,000	9	120	6	1,000	250	
24	Rincones	San Antonio and Conejos	1857	22.25	690	12	90	10	1,800	750	
25	Fuerticito	Conejos River	1858	31.47	520	9	90	5	900	415	
26	Mercitos	do	1859	38.99	1,500	16	120	10	1,000	250	
27	San Juan and San Rafael	do	1861, 1889	51.76	1,840	20	120	10	2,400	600	1861, 47.76; 1889, 4.00.
28	Espinosa	Natural springs	1862	19.54	100	3	10	2	40	70	
29	Chacon No. 1	Conejos River	1863	18.31	160	3	90	3	540	160	
30	Las Sauces	do	1867	88.43	3,500	15	150	10	3,000	3,200	
31	Lavato Irrigating	San Antonio River	1867	27.58	480	7	40	7	560	450	
32	Jose Bonifacio Romero	Conejos River	1870, 1889	81.97	4,000	20	120	10	1,000	250	1870, 56.97; 1889, 25.00.
33	Bernardo Romero	do	1870	9.26	500	3	120	3	320	80	
34	Galbis	Los Pinos Creek	1870	10.97	200	6	150	4	800	200	
35	Sanchez	Conejos River	1871	27.26	800	10	140	3	840	800	
36	J. F. Chacon No. 3	do	1872	18.31	80	6	90	2	320	80	
37	Sabine School Section	do	1873	11.95	320	6	70	3	420	220	
38	Jose Decedario Martinez	Natural springs	1874	9.26	110	3	75	2	300	110	
39	Vega Grande	Conejos River	1875, 1878	11.54	320	6	85	2.5	425	300	1875, 5.77; 1878, 5.77.
40	Au Cou Irrigating	do	1876, 1885, 1888	29.84	1,600	20	90	12	2,160	900	1876, 10.80; 1885, 8.00; 1888, 11.04.

List of ditches in District No. 22, Colorado—Continued.

No.	Name.	Stream.	Date of first use.	Decree.	Possible acreage.	Capacity.	1896. Days.	1896. Per day.	1896. Acre-feet.	1896. Acres.	Remarks.
41	Wm. Stewart & Co. Ir	Conejos River and springs	1876	11.40	300	11	60	3	360	300	
42	J. F. Chacon No. 2	Conejos River	1877, 1879, 1884, 1889.	16.08	960	9	85 75 60	3 4 2.5	510 600 300	180 370 80	1877, 7.54; 1879, 4.54; 1884, 2.00; 1889, 2.00.
43	Loroto	Natural spring	1878	7.54	200	3	100	3	600	200	
44	McCarroll	Conejos River	1878	13.72	160	6	40	2	160	40	
45	Manassa	do	1879	73.60	1,600	21	120	8	1,920	1,575	
46	Wm. Sabine No. 1	do	1880	7.71	160	5	70	3	320	80	
47	Martinez	do	1880	15.84	880	18	75	10	1,500	730	
48	J. M. Espinosa	Natural springs	1880	26.00	120	3	120	2.5	460	115	
49	Cordova	Conejos River	1880	6.54	220	6	75	3	450	225	
50	Chavez	San Antonio River	1880	12.72	640	3	85	3	510	430	
51	Jack's Irrigating	Conejos River	1881	8.12	120	6	70	3	380	95	
52	Ephraim	do	1881	47.00	2,700	47	120	4	960	2,700	
53	Martinez (on San Antonio)	San Antonio River	1881, 1888	39.68	640	6	60	4	480	200	1881, 13.68; 1888, 26.
54	Los Ojos No. 2	Conejos River	1881	5.95	4,200	6	150	4	1,200	4,200	2,000 acres by seepage.
55	Richfield Canal	do	1882, 1886	168.74	5,000	56	80	50	8,000	2,210	1882, 56.24; 1886, 112.50.
56	Loma Padre	do	1882	10.31	700	5	50	5	500	700	
57	Bancroft	do	1882	7.54	180	4	70	2	280	110	
58	Wm. Sabine No. 2	do	1882	7.71	100	5	70	2	280	70	
59	Los Ojos No. 1	do	1882	44.16	880	15	70	8	1,120	800	
60	Eldredge	do	1883	7.52	200	7	60	3	360	90	
61	Angostura	do	1883	42.72	160	3	90	1	180	50	
62	Northeastern	do	1883, 1886, 1888	122.80	20,000	35	180	4	1,440	720	1883, 34.71; 1886, 41.25; 1888, 46.84.
63	La Vega de la Serrietta	do	1883	6.75	160	3	70	3	420	120	
64	Cruz Charez	do	1883	1.00	160	3	70	3	420	120	
65	La Manga	San Antonio River	1883, 1884, 1886	10.00	640	2	60	2	240	110	1883, 4; 1884, 4; 1886, 2.
66	Broyle's Overflow No. 1	do	1883	1.50	40	2	60	1.5	160	40	
67	Broyle's Overflow No. 2	do	1883	2.50	60	3	60	2	240	60	
68	Broyle's Overflow No. 3	do	1883	1.50	60	2	60	1.5	180	60	
69	Jaramillo Overflow No. 1	do	1883	2.00	80	2	60	2	240	80	
70	Jaramillo Overflow No. 2	do	1883	2.00	80	2	60	2	240	80	
71	La Vega	Conejos River	1883, 1886	11.40	180	6	60	2	240	80	1883, 8.40; 1886, 3.
72	McCarroll	Mill Creek	1883	7.00	325	3	120	2	480	235	
73	Le Duc	Conejos River	1883, 1889, 1890	6.00	260	3	80	2	120	160	1883, 3; 1889, 2; 1890, 1.
74	Home	do	1883	4.50	160	4	90	2	360	160	
75	Ball Bros. Overflow No. 1	do	1883	22.00	3,000	4	90	2	360	3,000	1,000 acres by seepage.
76	Ball Bros.' Overflow No. 2	do	1883	20.00	3,000	4	90	2	360	3,000	1,000 acres by seepage.
77	Hughes's Overflow No. 1	San Antonio River	1883	12.00	480	7	.....	.....	.....	.....	None.
78	Hughes's Overflow No. 2	do	1883	6.00	240	5	.....	.....	.....	.....	None.
79	Manassa No. 2	Conejos River	1888	23.25	1,100	10	130	6	1,560	1,075	
80	Floyd Overflow No. 1	San Antonio River	1888	1.55	360	2	40	2	160	360	

			1887, 1888, 1889, 1890.								1883, 15; 1885, 4; 1886, 3.75; 1887, 7.65; 1888, 8; 1889, 4; 1890, 3.
84	Smith Bros	do	1883	8.00	640	6	150	2	600	640	
85	Gallegos & Lopez	San Antonio River	1883, 1888	4.00	400	2	100	1.5	300	290	1883, 1.50; 1888, 2.50.
86	Gallegos North Side	do	1883	3.50	160	3	40	2.5	200	160	
87	Punche	do	1883	15.00	320	3	40	2.5	200	220	
88	Cottonwood	Conejos River	1884	28.50	1,200	21	180	3	1,080	870	
89	A. D. Archuleta	do	1884	8.00	160	8	60	2	80	20	
90	Manassa Westfield	do	1885	54.00	6,000	60	80	45	7,200	5,930	1885, 30; 1887, 24.
91	Bagwell	do	1885	7.00	180	4	60	1.5	120	30	
92	Fox Creek No. 2	Fox Creek	1885	1.50	95	1	50	1	100	95	
93	Sanford	Conejos River	1886	107.50	6,000	20	80	20	3,200	2,270	
94	Fox Creek No. 1	Fox Creek	1886	2.50	80	2	50	1	100	80	
95	Alamo	Conejos River	1886, 1889	52.00	1,200	6	80	3	480	840	1886, 36; 1889, 16.
96	Antonio	do	1887	250.00	650	20	150	2	200	50	
97	Lobato & Cordova	San Antonio River	1887	8.00	320	10	40	6	480	240	
98	Magote	Conejos River	1887	342.40	12,000	50	50	5	500	400	
99	Florida	San Antonio River	1888	20.80	2,400	6	72	5	720	300	
100	Branch	Conejos River	1888	12.00	480	5					None.
	Taos Valley No. 1	do	1888	(500.00)							Omit from totals.
101	Paine No. 1	Conejos River and Springs.	1888	1.50	40	2	60	1.5	120	40	
102	Paine No. 2	do	1888	4.00	160	4	60	2	240	160	
103	Berkshire Farm	Conejos River	1888	12.00	1,000	9					None.
104	Corpe & Reeker's Canyon	do	1888	16.00	180	9	60	2	240	100	
105	Storer	do	1888	2.50	120	2	75	2	150	95	
106	Nogales Valley	do	1888	12.00	640	9	60	1	120	290	
	Taos Valley No. 2	San Antonio River	1889	(500.00)							Omit from totals.
107	Brazos del Norte	Conejos River	1889	20.00	800	10	60	7	840	350	
	Taos Valley No. 3	San Antonio River	1889	(500.00)							Do.
	Total			2,978.42	120,350	1,084			98,285	60,625	

List of ditches in District No. 24, Colorado.

No.	Name.	Stream.	Date of first use.	Decree.	Possible acreage.	Capacity.	1895.	1896.				Remarks.
							Acres.	Days.	Per day.	Acre-feet.	Acres.	
1	San Luis People's	Culebra Creek	1852	23.00	400	22		165	10	1,480	370	
2	San Pedro	do	1852	19.50	480	5		160	4	1,280	480	
3	Acequia Madre	Costilla Creek	1853	22.50	1,000	26		105	20	3,600	900	
4	Montez	Rito Seco	1853	1.00	20	5		140	1	40	10	
5	Vallejos	Vallejos Creek	1854	17.00	320	20		165	8	1,280	320	
6	Manzanares	Costilla Creek	1854	23.00	1,000	28		105	21	3,680	920	
7	Acequiacita	do	1855	1.00	50	1		90	1	120	30	
8	San Acocio	Culebra Creek	1856	46.00	800	60		160	12	2,920	730	
9	Madriles	Costilla Creek	1856	12.00	500	14		105	10	1,920	480	
10	Cholifa	do	1857	10.00	400	12		105	9	1,600	400	
11	Cerro	Culebra Creek	1857	40.00	420	60		160	12	1,600	400	
12	Francisco Sanchez	do	1858	12.50	180	13		135	3	720	180	
13	Mestas	Vallejos Creek	1858	4.50	60	7		140	1.5	240	60	
14	San Francisco	San Francisco Creek	1860	16.00	400	20		145	8	1,400	350	
15	Trujillo	Costilla Creek	1861	1.00	40	1		90	1	80	20	
16	Little Rock	San Francisco Creek	1873	1.00	40	1		110	1	80	20	
17	Garcia	Costilla Creek	1873	1.00	40	1		90	1	125	30	
18	Torcido		1874	1.00	35	1		120	0.5	120	35	
19	Abudo Martin	Torcido Creek	1874	3.50	70	4						None.
20	Guadalupe Vigil	Vallejos Creek	1880	4.00	80	6		160	2	320	80	
21	J. M. J. Maez	Ventero Creek	1881	1.50	20	4		145	0.5	80	20	
22	Antonio Pando	Culebra Creek	1881	1.25	15	4		90	0.5	60	15	
23	Guadalupe Sanchez	do	1883	3.25	120	6		40	3	240	100	
24	Main Eastdale	Costilla Creek	1889		900	25		95	12	2,280	900	
25	South Eastdale	do	1889		200	10		90	4	720	200	
	Total			265.50	7,500	356	9,500			25,980	7,050	

	[illegible]	[illegible]	use.	cree.	acre-age.	ity.	Days.	per day.	Acre-feet.	Acres.	Days.	per day.	Acre-feet.	Acres.	[illegible]
1	Wells Middle	Kerber Creek	1866	.60	30	12	100	0.6	80	20	65	0.6	78	20	
2	Wells North	do	1866	.40	20	16	100	0.4	80	20	65	0.4	52	20	
3	Wells-Kerber	do	1866, 1878, 1882, 1884.	9.00	450	244	100	9	1,720	430	65	9	1,170	430	1866, 2.20; 1878, 2 1882, 4; 1884, 0.80.
4	Dittrich-Steele	San Luis Creek	1867	1.40	70	4.5	90	1.4	255	70	65	1.4	182	70	
5	Dittrich No. 1	do	1867	.20	10	4.5	90	0.2	36	10	65	0.2	26	10	
6	Dittrich No. 2	do	1867	.20	10	1	90	0.2	36	10	65	0.2	26	10	
7	Dittrich No. 3	do	1867	1.00	50	2.7	90	1	180	50	65	1	130	50	
8	Dittrich No. 4	do	1867	.40	40	9	100	0.8	160	40	65	0.8	104	40	
9	Steele No. 2	do	1867, 1873	3.80	190	11.8	100	3.8	600	150	65	3.8	494	150	1867, 1.60; 1873, 2.20.
10	Hoffman	Cotton Creek	1868, 1870, 1875.	3.40	370	6.2	110	6.2	1,264	370	65	3.4	442	370	1868, 2.40; 1870, 0.60; 1875, 0.40.
11	Neidhardt.	do	1868, 1870, 1872, 1873, 1875.	10.40	550	13.7	110	9.2	2,024	500	65	10.4	1,352	550	1868, 4.40; 1870, 1; 1872, 2.20; 1873, 2.60; 1875, 0.20.
12	Baca No. 3	North Crestone Creek	1869	4.00	200	12	110	4	780	195	65	4	520	195	
13	Baca No. 4	South Crestone Creek	1869	7.00	350	22	110	7	1,400	350	65	7	910	350	
14	Major Creek	Major Creek	1870	3.90	240	3.9	100	3.5	700	200	65	3.9	507	240	
15	Garner No. 1	Garner Creek	1870	6.40	320	8.7	110	4.2	720	180	65	6.4	832	230	
16	Cotton Creek	Cotton Creek	1870, 1872, 1873, 1874, 1875.	17.40	670	60	110	12	2,500	625	65	13.4	1,742	625	1870, 3.60; 1872, 2; 1873, 1.80; 1874, 3.60; 1875, 6.40.
17	Baca No. 9	Crestone Creek	1870, 1888	39.00	1,950	56	100	39	7,800	1,950	65	39	5,070	1,950	1870, 20; 1888, 19.
18	Baca No. 11	do	1870	9.00	450	10.2	100	9	1,800	450	65	9	1,170	450	
19	Baca No. 12	do	1870, 1876, 1878, 1882, 1883, 1884.	44.20	2,210	23.7	100	44.2	8,840	2,210	65	44.2	5,746	2,210	1870, 17.00; 1876 11.00; 1878, 3.20; 1882, 3.20; 1883, 3.20; 1884. 6.40.
20	Baca No. 13	do	1870	5.40	270	18	100	5.4	1,080	270	65	5.4	702	270	
21	Wales & Shellabarger No. 1.	Rito Alto	1870, 1872	6.60	280	65	110	5.6	1,060	265	65	5.6	728	265	1870, 4.40; 1872, 2.20.
22	Squires No. 1	San Luis Creek	1870	4.00	200	36.8	110	2	400	100	65	4	520	200	
23	Baca No. 5	North Crestone Creek	1870, 1883	5.80	270	26.9	100	5.4	1,080	270	65	5.4	702	270	1870. 3.20; 1883, 2.60.
24	Baca No. 6	do	1870	4.00	200	6.7	100	4	800	200	65	4	520	200	
25	Baca No. 7	do	1870	4.00	200	11.2	100	4	800	200	65	4	520	200	
26	Baca No. 14	South Branch Isabel Creek.	1870	3.92	195	3.9	100	3.9	780	195	65	3.9	507	195	
	Baca No. 15	Willow Creek	1870	29.00	1,450	38.6	100	29	5,800	1,450	65	29	3,770	1,450	
27	Baca No. 16	do	1870	26.00	1,300	27.7	100	26	5,200	1,300	65	26	3,380	1,300	
28	Baca No. 17	do	1870	11.60	580	11.6	100	11.6	2,320	580	65	11.6	1,508	580	
29	Baca No. 18	do	1870	2.40	120	7.2	100	2.4	480	120	65	2.4	312	120	
30	Baca No. 19	Spanish Creek	1870	39.80	1,990	48.1	100	30.8	6,000	1,500	65	39.8	5,174	1,990	
31	Baca No. 20	do	1870	5.40	270	25.4	100	5.4	1,080	270	65	5.4	702	270	
32															

List of ditches in District No. 25, Colorado—Continued.

No.	Name.	Stream.	Date of first use.	Decree.	Possible acreage.	Capacity.	1895.				1896.				Remarks.
							Days.	Per day.	Acre-feet.	Acres.	Days.	Per day.	Acre-feet.	Acres.	
33	Baca No. 21	Cottonwood Creek	1870	4.00	200	7.8	100	4	800	200	65	4	520	200	
34	Baca No. 22	do	1870	70.00	3,600	70	100	50	10,000	2,600	65	70	9,100	3,540	
35	Baca No. 23	do	1870	20.40	1,020	30.6	100	20	4,000	1,020	65	20.4	2,652	1,020	
36	Baca No. 24	Deadman Creek	1870, 1889	39.00	1,950	40.3	100	30	6,000	1,500	65	39	5,070	1,950	1870, 10.00; 1889, 29.00.
37	Baca No. 25	do	1870	24.00	510	45	100	10.2	2,040	510	65	10.2	1,326	510	
38	Baca No. 26	do	1870, 1889	20.80	1,040	20.1	100	20.8	4,160	1,040	65	20.8	2,704	1,040	1870, 6.00; 1889, 14.80.
39	Baca No. 27	do	1870	2.76	140	2.8	100	2.8	560	140	65	2.7	351	140	
40	Baca No. 28	do	1870	1.00	150	1	100	3	600	150	65	1	130	150	
41	Clayton "F"	Kerber Creek	1870	.80	90	5	110	0.8	175	60	65	1.8	234	60	
42	San Isabel	San Isabel Creek	1870, 1872, 1874, 1876, 1886.	14.90	745	26	110	14.9	2,820	705	65	14.9	1,937	705	1870, 2.80; 1872, 2.80; 1874, 5.10; 1876, 1.50; 1886, 3.20.
43	North	do	1870, 1874, 1876, 1887.	8.90	465	13	100	8.9	1,780	465	65	8.9	1,157	465	1870, 1.20; 1874, 3.60; 1876, 1.50; 1887, 2.60.
44	Baca No. 8	South Crestone Arroyo.	1870	3.80	190	3.8	100	3.8	760	190	65	3.8	494	190	
45	Wales and Travis	Rito Alto	1870, 1874, 1883, 1887.	18.86	945	29	100	18.8	3,760	945	65	18.8	2,444	945	1870, 3.60; 1874, 3.80; 1883, 7.50; 1887, 4.46.
46	Wales No. 1	do	1870	1.00	50	20	100	1	200	50	65	1	130	50	
47	Wales No. 2	do	1870, 1873	1.80	90	52.5	100	1.8	360	90	65	1.8	235	90	1870, 0.80; 1873, 1.00.
48	Baca No. 10	Crestone Creek	1870, 1888	39.40	1,970	51.5	100	39.4	7,880	1,970	65	39.4	5,122	1,970	1870, 22.40; 1888, 17.00.
49	Wales & Shellabarger No. 2.	Rito Alto	1870, 1872, 1879, 1884, 1887.	36.00	1,800	69	100	36	7,200	1,800	65	36	4,680	1,800	1870, 4.40; 1872, 6.40; 1879, 6.40; 1884, 12.00; 1887, 6.80.
50	Schultz-Dittrich	San Luis	1870, 1873, 1880.	11.20	575	42.4	100	10	2,000	500	65	11.2	1,456	575	1870, 2.80; 1873, 5.40; 1880, 3.00.
51	San Luis Co	do	1871, 1874	12.75	670	40.8	120	12.7	2,680	670	65	12.7	1,651	670	1871, 7.29; 1874, 5.46.
52	Steele Creek	Steele Creek	1871	4.20	210	20.5	110	4.2	720	180	65	4.2	546	180	
53	Hot Spring Creek	Hot Spring Creek	1871	3.98	195	4	125	3.9	780	195	65	3.7	481	195	
54	Clayton E	Cottonwood Creek	1872	4.00	215	4.9	100	4	800	215	65	4	520	215	
55	Clayton D	Kerber Creek	1872	4.40	265	6	100	4.4	880	265	65	4.4	572	265	
56	Petersons No. 1	Wild Cherry Creek	1872, 1874, 1875, 1884.	14.90	745	52	120	14.9	2,700	675	65	14.9	1,937	675	1872, 3.00; 1874, 6.50; 1875, 0.70; 1884, 4.70.
57	Wales No. 3	Rito Alto	1872, 1887	5.50	275	17	120	5.5	1,100	275	65	5.5	715	275	1872, 4.00; 1887, 1.50.
58	Schilling	Spring Brook, San Luis Creek.	1872	2.80	140	10	100	2.8	560	140	65	2.8	364	140	

	No. 2.														
61	Tobler	San Luis Creek	1873	.40	20	4	100	0.4	80	20	65	0.4	52	20	
62	H. H. Wales	Rito Alto	1873, 1884	2.40	120	6.9	120	2.4	480	120	65	2.4	312	120	1873, 0.80; 1884, 1.60.
63	Greer No. 1	San Luis Creek	1873	2.80	140	8	100	2.8	560	140	65	2.8	364	140	
64	Daniels & Fish No. 4	Kerber Creek	1873, 1876	4.80	240	35.3	110	4.8	1,055	240	65	4.8	624	240	1873, 2.00; 1876, 2.80.
65	Gordon	Cotton Creek	1873	1.40	70	4.7	120	1.4	280	65	65	1.4	182	65	
66	Kennedy No. 1	San Luis Creek	1873	2.00	100	6	110	2	400	100	65	2	260	100	
67	Kennedy No. 2	do	1873	9.80	490	14.7	110	9.8	1,960	490	65	5.8	754	490	
68	Shellabarger & Eaton.	Rito Alto	1873, 1888	3.30	165	53.3	120	3.3	480	120	65	3.3	429	120	1873, 0.50; 1888, 2.80.
69	Steele No. 1	San Luis Creek	1873	1.00	50	14.1	120	1	180	45	65	1	130	45	
70	Greer No. 2	do	1873	3.20	160	6.4	100	3.2	630	160	65	3.2	416	160	
71	Tabler-Rominger	do	1873	10.00	500	23.8					65	10	1,300	500	No return for 1895.
72	San Luis	do	1873	4.00	200	10.8	100	4	800	200	65	4	520	200	
73	Clayton Old Channel	Kerber Creek	1874	2.40	120	27	110	2.4	480	120	65	2.4	312	120	
74	Wales San Luis No. 1	San Luis Creek	1874, 1876, 1880	8.40	420	14.4	100	8.4	1,680	420	65	8.4	1,092	420	1874, 3.20; 1876, 3.20; 1880, 2.00.
75	Wales San Luis No. 2	do	1874, 1876	3.20	160	11	100	3.2	640	160	65	3.2	415	160	1874, 1.60; 1876, 1.60.
76	Wales No. 4	Rito Alto	1874	1.60	80	4.8	100	1.6	320	80	65	1.6	208	80	
77	Hills No. 1	Kerber Creek	1874	.72	50	8.3	90	0.7	126	50	65	0.7	91	50	
78	Sanchez	Cotton Creek	1874	.50	25	2.7	110	0.5	80	20	65	0.5	65	20	
79	Sanford	Rito Alto	1874, 1886	4.20	210	26	100	4.2	840	210	65	4.2	546	210	1874, 2.40; 1886, 1.80.
80	Greer No. 2	San Luis Creek	1874	3.20	160	8	100	3.2	640	160	65	3.2	416	160	
81	Hills No. 2	Kerber Creek	1874	.30	15	2.7	120	0.3	60	15	65	0.3	40	15	
82	Hills No. 4	do	1874	.08	5	2.7	120	0.1	20	5	65	0.1	13	5	
83	Hills No. 3	do	1874	.16	15	2	120	0.2	48	15	65	0.2	26	15	
84	Clayton A	Kelley Creek	1874	2.40	120	2.9	110	2.4	480	120	65	2.4	312	120	
85	Clayton B	do	1874	4.00	200	4.7	110	4	800	200	65	4	520	200	
86	Garner No. 2	San Luis Creek	1875	2.00	100	6.2	100	2	400	100	65	2	260	100	
87	Hall No. 1	Kerber Creek	1875, 1881, 1882	9.70	485	26.6	110	9.7	1,050	485	65	9.7	1,261	485	1875, 5.30; 1881, 2.00; 1882, 2.40.
88	Hoffman No. 2	Major Creek	1875	.90	45	1.5	110	0.9	160	40	65	0.9	117	40	
89	Spiegel	San Luis Creek	1875	2.25	130	2.3	100	2.6	520	130	65	2.2	286	130	
90	Hice No. 1	Clover Creek	1875	1.50	75	6	110	1.5	240	60	65	1.5	195	60	
91	Hice No. 2	do	1875	1.20	60	2	110	0.2	20	5	65	0.2	26	5	
92	Hice No. 3	do	1875	2.00	100	20	110	2	400	100	65	2	260	100	
93	Hice No. 4	do	1875	.20	10	1.9	110	0.2	44	10	65	0.2	26	10	
94	Hice No. 5	do	1875	.80	40	1.5	110	0.8	116	40	65	0.8	104	40	
95	Hice No. 6	San Luis Creek	1875	.70	35	2	110	0.7	140	35	65	0.7	91	35	
96	Hice No. 7	Gooseberry Creek	1875	.30	15	5.4	110	0.3	66	15	65	0.3	39	15	
97	Hice No. 8	San Luis Creek	1875	.70	35	3	110	0.7	140	35	65	3	140	35	
98	Arthur Young	do	1876	16.00	815	38.1	50	8	800	500	65	16	2,080	815	
99	Daniels & Fish Arroyo	Kerber Creek	1876, 1884	6.00	300	10.5	100	6	1,200	300	65	6	780	300	1876, 3.20; 1884, 2.80.
100	Allen No. 1	Crestone Creek	1876, 1878	3.20	160	10.8	100	1.6	320	80	65	1.6	208	80	1876, 1.60; 1878, 1.60.
101	B. Clark	Alder Creek	1876	1.40	75	4.8	100	1.4	280	75	65	1.4	182	75	
102	Howard & Hall	San Luis Creek	1876	1.30	65	3	90	1.3	220	55	65	1.3	169	55	
103	Henkaufer No. 2	North Crestone Creek	1878	.30	15	1.1	110	0.8	60	15	65	0.3	40	15	
104	Ford No. 1	San Luis Creek	1878	1.60	80	4	110	1.6	320	80	65	1.6	208	80	
105	Hills No. 5	Kerber Creek	1879, 1884	3.26	165	13	110	2.2	460	115	65	2.2	286	115	1879, 2.26; 1884, 1.00.
106	Shewalter No. 1	San Luis Creek	1879	.70	35	12	90	0.7	126	35	65	0.7	91	35	

List of ditches in District No. 25, Colorado—Continued.

No.	Name.	Stream.	Date of first use.	Decree.	Possible acreage.	Capacity.	1895.				1896.				Remarks.
							Days.	Per day.	Acre-feet.	Acres.	Days.	Per day.	Acre-feet.	Acres.	
107	Shewalter No. 2	San Luis Creek	1879	.80	40	3	90	0.8	145	40	65	0.8	104	40	
108	Ross	do	1879	4.70	235	18.3	110	4.7	940	235	65	4.7	611	235	
109	Briley	Kerber Creek	1880	1.20	60	1.7	90	1.2	216	60	65	1.2	156	60	
110	Gash	North Crestone Creek	1880	.60	30	2.4	100	0.6	120	30	65	0.6	78	30	
111	Hopkins	do	1880	.12	5	5.3	120	0.1	25	5	65	0.1	13	5	
112	Silver Creek	Silver Creek	1880	2.00	100	29	100	2	380	95	65	2	260	95	
113	Neeland	Neeland Creek	1880	2.40	120	6	110	2.4	480	120	65	2.4	312	120	
114	Shellabarger No. 2	Rito Alto	1880	4.80	240	18.3	110	4.8	960	240	65	4.8	624	240	
115	Means No. 1	Alder Creek	1880	.70	45	7	50	0.9	90	45	65	0.9	117	45	
116	Stump No. 1	Clover Creek	1880	.50	25	3.4	90	0.5	90	25	65	0.5	65	25	
117	Stump No. 2	do	1880	.12	5	3.5	90	0.1	18	5	65	0.1	13	5	
118	Stump No. 3	do	1880	.20	15	1	90	0.2	36	15	65	0.2	26	15	
119	Squires No. 2	San Luis Hot Springs	1880	.80	40	2.2	50	0.8	80	40	65	0.8	104	40	
120	Allen	Crestone Creek	1880	1.60	80	4.6	100	1.6	320	80	65	1.6	208	80	
121	Means No. 2	San Luis Creek	1880	.30	15	2	50	0.3	30	15	65	0.3	39	15	
122	McFarland A and B	Eagle Brook and Butterfly Creek.	1881	6.80	340	8	100	4.9	980	250	65	4.4	572	250	
123	Barsch No. 1	Brook Creek	1881	1.60	80	13.1	60	1.6	192	75	65	1.6	208	75	
124	Robinson	Spring Creek	1881	1.80	90	2.4	70	1.8	252	70	65	1.8	234	70	
125	Robinson & Reese	do	1881	2.20	100	2.3	60	2	240	90	65	2	260	90	
126	Robinson & Reese, jr	Raspberry Creek	1881	1.00	50	4	50	1	100	45	65	1	130	45	
127	Davison No. 3	Spring Creek	1881	.16	10	6	80	0.2	20	5	65	0.2	26	5	
128	Henry White	Kerber Creek	1881	1.00	35	11	75	0.7	105	35	65	0.7	91	35	
129	Clark A	Rock Creek	1881, 1885	7.20	360	8	90	3	540	300	65	7.2	936	355	1881, 4; 1885 3.20.
130	Turner	Kerber Creek	1881	1.20	60	6.5	60	1.2	144	55	65	1.2	156	55	
131	Richard No. 1	West Spring Creek	1881	1.20	60	7.7	50	1.2	120	50	65	1.2	156	50	
132	Ridenour	Spring near Garner Creek.	1881	.60	30	2.1	120	0.6	80	20	65	0.6	78	20	
	Davison No. 2	Spring Creek	1881	.60	30	5	80	0.6	95	25	65	0.6	78	25	
133	Barbary Tabler	Cedar Creek	1882	.80	40	9.3	120	0.8	100	25	65	0.8	104	25	
134	Kennedy No. 3	San Luis Creek	1882	1.00	50	9	20	1	40	50	65	1	130	50	
135	Geo. C. Travis	Cedar Creek	1882	.08	5	22.8					65	0.1	13	5	
136	Richard No. 2	East Spring Creek	1882	.24	10	6.9	20	0.2	8	5	65	0.2	26	10	
137	Clayton G	Kerber Creek	1883	2.00	100	4.6	120	2	360	90	65	2	260	90	
138	De Camp	San Luis Creek	1883	.60	90	3	90	1.8	324	90	65	1.8	234	90	
139	Kaufman	Kelley Creek	1883	2.00	100	3.5	100	2	390	95	65	2	260	95	
140	White	Little Kerber Creek	1883	.40	20	1	100	0.4	80	20	65	0.4	52	20	
141	Davison No. 1	Spring Creek	1884	.80	40	3	140	0.8	112	40	65	0.8	104	40	

147	[illegible]	[illegible]	1884, 1888	5.00	250	12	100	3.5	700	175	65	3.5	455	175	1884, 1.50; 1888, 3.50.
148	H. C. Ridenour No. 1	Spring near Major Creek.	1884	1.30	65	2.2	100	1.3	200	50	65	1.3	169	50	
149	John De Camp B.	San Luis Creek	1884	.60	35	1	75	0.6	90	35	65	0.6	78	35	
150	Ewing	San Isabel Creek	1884	1.90	95	10	70	1.9	285	95	65	1.9	247	95	
151	Clark "B"	Yankee Creek	1884	3.20	160	4	60	3.2	384	160	65	3.2	416	160	
152	Clayton "C"	Kelley Creek	1884	3.60	180	6	110	3.6	620	155	65	3.6	468	155	
153	Stump No. 4	Clover Creek	1885	.20	10	3	110	0.2	20	5	65	0.2	26	5	
154	Sapp & Braley	San Luis Creek	1885, 1886	3.60	180	3.2	30	2.8	168	70	65	2.8	364	140	1885, 2.80; 1886, 0.80.
155	Stump	Clover Creek	1885	.20	10	1.7	110	0.2	44	10	65	0.2	26	10	
156	Prairie Dog	Spring Creek	1885	.60	30	3.5	25	0.6	30	15	65	0.6	78	30	
157	Norris	Kerber Creek	1886, 1888	2.70	135	3	75	2.7	405	120	65	2.7	350	120	1886, 0.70; 1888, 2.00.
158	Reese Irrigating	Spring Creek	1886	2.40	120	6	50	2.4	240	120	65	2.4	312	120	
159	Braley	San Luis Creek	1886	1.40	70	4	40	1.9	152	70	65	1.4	182	70	
160	Jordon No. 2	Kerber Creek	1887	.80	40	12	25	0.8	40	40	65	0.8	104	40	
161	Jordon No. 1	Kelly Creek	1887	2.80	140	15	10	2.8	56	140	65	2.8	364	140	
162	Alder Creek	Alder Creek	1887	1.50	75	10	90	1.5	270	75	65	1.5	195	75	
163	H. C. Ridenour No. 2.	Major Creek	1888	1.30	65	2.2	50	1.3	130	65	65	1.3	169	65	
164	Frazee	San Isabel Creek	1888	4.00	200	7	90	4	720	190	65	4	520	190	
165	Doray No. 1	Carpenter Creek	1888	.40	20	3	40	0.4	32	20	65	0.4	52	20	
166	Doray No. 2	do	1888	.40	20	2.4	30	0.4	25	20	65	0.4	52	20	
167	Doray No. 3	do	1888	.44	20	2.7	20	0.4	16	10	65	0.4	52	20	
168	Swidensky	Gooseberry Creek	1888	.60	30	8	50	0.6	60	30	65	0.6	78	30	
169	Cody	Kerber Creek	1888	.30	15	1.5	75	0.3	45	15	65	0.3	39	15	
170	Hall No. 2	San Luis Creek	1889	1.60	80	4.8	90	1.6	288	80	65	1.6	208	80	
171	Carver	Major Creek	1889	1.50	75	2.2					65	1.5	195	75	No return for 1895.
	Ditches without decrees (number unknown).				1,800	45			3,000	1,515			2,400	1,625	
	Total			919.18	47,605	2,501.3			161,975	42,940			118,100	46,295	

List of ditches in District No. 26—Colorado.

No.	Name.	Stream.	Date of first use.	Decree.	Possible acreage (a).	Capacity.	1896.				Remarks.
							Days.	Per day.	Acre-feet.	Acres.	
1	Malone-Sullivan No. 1	Saguache Creek	1866	5.20		20					
2	Heimberger No. 1	do	1866	.30		1					
3	Heimberger No. 2	do	1866	.80		6					
4	Cato	do	1866	.42		8					
5	Hazard No. 1	do	1866	.10		4					
6	Hazard No. 2	do	1866	.10		2					
7	Malone	do	1866	2.40		12	30	2	120	90	
8	Lawrence Arroyo	do	1867	9.20		15	20	3	120	160	
9	Malone-Sullivan No. 2	do	1867	1.56		12					
10	Luengen-Sullivan	do	1867	3.70		6					
11	Gotthelf No. 1	do	1867	8.80		12	15	2	60	100	
12	Russell No. 4	do	1867	5.60		7	15	3	90	145	
13	Ashley & Proffit	do	1868	8.20		11	15	11	330	300	
14	Proffit Company	do	1868-1870-1872	6.00		6	35	6	420	220	1868, 1.20; 1870, 2.40; 1872, 2.40
15	Fullerton No.	do	1868	6.00		7	25	6	300	310	
16	Stubbs & Gallego	do	1869	7.00		10	25	1	50	50	
17	Chavez Lateral	do	1869	4.40		4	15	3	90	160	
18	Russell Company	do	1869	6.20		6	25	2	100	100	
19	Spencer	do	1870	6.20		30	25	6	300	195	
20	Ford	do	1870-1871-1872	12.40		36	25	2	100	125	1870, 3.40; 1871, 5; 1872, 4.
21	Mears No. 5	do	1870	1.00		4					
22	Mears No. 4	do	1870	2.00		3	15	1.5	45	75	
23	Ward Highline	do	1871	3.70		3	25	3	150	160	
24	Mountfield	do	1871	2.90		4					
25	Braun Bros. No. 1	do	1871	4.00		8	15	8	240	465	
26	Brawn Bros. No. 2	Saguache Creek	1871	2.00		4	15	4	120	135	
27	Gotthelf No. 3	do	1871	3.20		4	25	4	200	100	
28	Gotthelf No. 4	do	1871	.30		1	25	1	50	40	
29	Manchego	do	1871	2.20		3	25	2	100	100	
30	Hodding No. 3	Hodding Creek	1871	.20		1	15	1	30	40	
31	Hodding No. 4	Saguache Creek	1871	1.20		6	15	4	120	240	
32	Wall	do	1872	11.90		12	25	12	600	325	
33	Proffit-McDonough	do	1872	2.20		6	15	3	90	160	
34	Jeep & Scandrett	do	1872	4.00		6	15	6	180	235	
35	Taylor & Ashley	do	1872	4.60		5	20	5	200	235	
36	Morrison	do	1872	2.50		8	10	3	60	160	
37	Moses Goff No. 1	do	1872	3.00		8	15	3	90	120	
38	Moses Goff No. 2	do	1872	2.60		8	15	2	60	105	
39	Moses Goff No. 3	do	1872	5.60		15					
40	Garcia No. 1	do	1872	2.60		4	10	1	20	50	

47	Hartman Bros. No. 2	do	1873, 1875, 1877	12.80		25					1873, 3.80; 1875, 1.80; 1877, 7.20.
48	Mill	do	1873	1.00		2	15	1	30	50	
49	Seitz, McClure & Ashley	do	1873, 1888	6.00		12	15	9	270	300	1873, 4.60; 1888, 1.40.
50	Hawkins	do	1873	4.00		12	20	12	480	200	
51	George Ball	Saguache Creek	1873, 1882	6.00		6					1873, 3.00; 1882, 3.00.
52	Gotthelf Somora	do	1873	1.50		3	20	2.5	100	50	
53	Jones	do	1873	.38		4	20	1.5	60	60	
54	Munro No. 2	do	1873	2.18		18					
55	Hartman Bros. No. 3	do	1873 1874, 1875, 1876.	8.00		20					1873, 3.20; 1874, 1.60; 1875, 2.40; 1876, 0.80.
56	Houghland	do	1873	3.40		30					
57	Hartman Bros. No. 4	do	1874, 1875, 1876, 1877, 1879, 1881.	24.00		35					1874, 8.48; 1875, 1.60; 1876, 1.92; 1877, 2.40; 1879, 6.40; 1881, 3.20.
58	Ellis & Lamb	do	1874	2.80		6	15	6	180	280	
59	Russell	do	1874	5.20		8	20	5	200	225	
60	Jaques	do	1874	1.80		6	20	4	160	185	
61	Turnbull & Luengen	do	1874, 1877, 1886.	10.40		18					1874, 1.80; 1877, 3.60; 1886, 5.00
62	Heru	do	1874	1.00		2					
63	Carruthers	do	1874	1.00		2	20	1.5	60	75	
64	Russell No. 2	do	1874	3.00		8	25	3	150	160	
65	North Stubbs Ex. No. 5	do	1874	1.04		5					
66	Hodding No. 2	do	1874	.30		6	15	1	30	60	
67	Piquet No. 7	Middle Creek	1874	1.60		6			60	75	
68	Campbell No. 1	Saguache Creek	1875	4.00		20					
69	Campbell No. 4	do	1875	2.50		5					
70	Monk No. 1	do	1875	8.40		9	20	6.5	260	450	
71	Campbell No. 6	do	1875	6.10		30					
72	Hartman Bros. No. 1	do	1875, 1881	4.80		12	15	3	90	160	1875, 3.20; 1881, 1.60.
73	Irwin	do	1875	9.60		30	15	3	90	160	
74	Werner "A"	do	1875	2.00		25			40	100	
75	Downer No. 1	do	1875	2.80		10	6	1	12	40	
76	Piquet No. 6	Middle Creek	1875	1.20		4			50	60	
77	Lenders No. 1	Lenders Creek	1875	1.00		4					
78	Mears No. 1	Saguache Creek	1875	1.30		3					
79	Mears No. 2	do	1875	1.50		2					
80	Garcia No. 2	do	1875	1.40		6					
81	Hodding No. 5	do	1875	1.50		6					
82	Piquet No. 1	Middle Creek	1875	1.60		12			60	75	
83	John Shore	Saguache Creek	1876-1877	5.00		20					1875, 3.20; 1876, 1.00; 1877, 0.80
84	John Slane Arroyo	do	1876	2.76		15	15	3	90	120	
85	Middle	do	1876	1.60		12					
86	Piquet No. 3	Middle Creek	1876	.80		2			35	40	
87	North	Saguache Creek	1876	3.20		18					
88	Ashley & Means	do	1876	3.20		18	10	4	80	200	
89	O. Bergfield & Werner No. 1	do	1876	1.90		2			60	180	
90	O. Bergfield & Werner No. 2	do	1876	1.90		3	10	3	60	160	
91	Gow & Dick	do	1876	1.80		1					
92	Coleman South	do	1876	2.40		3					

a These returns defective. See report for explanation of these tables.

List of Ditches in District No. 26—Colorado—Continued.

No.	Name.	Stream.	Date of first use.	Decree.	Possible acreage (*a*).	Capacity.	1856.				Remarks.
							Days.	Per day.	Acre-feet.	Acres.	
93	Campbell No. 5	Saguache Creek	1876	1.56		9					
94	William Stowe	do	1877-1879	6.40		12					1876, 1.08; 1877, 2.12; 1879, 3.20
95	Campbell No. 2	do	1877-1879	1.90		12					
96	Shore	do	1877	6.00		14					
97	Hodgson No. 1	do	1877	1.60		16					
98	Piquet No. 2	Middle Creek	1887	1.60		5			60	75	
99	Piquet No. 5	do	1877	.80		7			30	40	
100	Piquet No. 4	do	1877	1.00		5			40	50	
101	Jones & Benjamin No. 1	Saguache Creek	1877	2.40		3	25	3	150	160	
102	John Slane	do	1877	1.40		4	15	1	30	40	
103	Schaller No. 1	do	1877	1.00		8	10	1	20	50	
104	Schaller No. 2	do	1877	1.00		7	10	1	20	55	
105	Jones & Benjamin No. 2	do	1877	.50		16	25	1	50	30	
106	Sullivan	do	1877, 1882	7.20		9					1877, 4.80; 1882, 2.40.
107	Piquet No. 10	Ford Creek	1878	1.40		6			55	60	
108	Campbell No. 7	Saguache Creek	1878	4.80		4					
109	Mears No. 3	do	1878	.40		3					
110	Fullerton No. 2	do	1878	1.80		4					
111	Laughlin	do	1878, 1880	1.90		8					1878, 0.90; 1880, 1.00.
112	Piquet No. 9	Ford Creek	1879	1.00		9			40	50	
113	Downer	Saguache Creek	1879	1.60		2	20	1.5	60	120	
114	Seitz & Benjamin	do	1879	1.20		6					
115	Lenders No. 2	Lenders Creek	1879	1.20		2					
116	Chase & Peyton	Saguache Creek	1879	5.60		4					
117	Farrington No. 1	do	1879	1.40		5	20	2	80	100	
118	Piquet No. 14	Skelton Creek	1880	1.00		1			40	50	
119	Piquet No. 13	do	1880	1.30		1			55	65	
120	Piquet No. 16	do	1880	.40		4			15	20	
121	Piquet No. 17	do	1880	1.40		4			55	70	
122	Piquet No. 18	do	1880	.10		3			5	5	
123	Piquet No. 19	do	1880	.70		3			30	35	
124	Piquet No. 20	do	1880	.60		6			25	30	
125	Osgood	Saguache Creek	1880	3.00		12					
126	McCree	Saguache Creek	1880	2.00		6					
127	Luengen	do	1880	9.60		21	25	2	100	120	
128	Marshall & Arter	do	1880-1884	3.60		24	25	3	150	140	1880, 2.20; 1884, 1.40.
129	Elwes No. 1	do	1880	1.40		6	10	2	40	100	
130	Elwes No. 2	do	1880	1.00		4	10	1	20	60	
131	Monk No. 3	do	1881	2.50		4	20	2	80	150	
132	Russell No. 3	do	[illegible]	[illegible]		[illegible]					

141	Piquet No. 23	do	1882	.10		3			20	25	
142	Hodgson No. 2	Saguache Creek	1883	1.20		4			5	5	
143	Holcomb	do	1883-1885	10.00		14	7	13	182	650	1883, 4.80; 1885, 5.20.
144	Lawrence No. 2	do	1883	4.40		4	20	1	40	50	
145	Lawrence No. 3	do	1883	2.40		6					
146	Piquet No. 12	Ford Creek	1883	.70		4			25	35	
147	Piquet No. 21	Saguache Creek	1883	.70		9			30	35	
148	Piquet No. 8	Middle Creek	1883	.80		3			30	40	
149	Arroyo	Saguache Creek	1883	9.20		65					
150	Piquet No. 11	Ford Creek	1883	.40		2			15	20	
151	Goodwin	Saguache Creek	1883, 1884	9.00		5					1883, 1.60; 1884, 7.40.
152	Travis No. 1	do	1884	16.00		16					
153	Travis No. 2	do	1884	4.00		4					
154	Travis No. 3	do	1884	5.00		5					
155	Extension Goodaker	do	1884	1.00		8					
156	Freise No. 1	do	1884	2.00		3	18	3	108	150	
157	David Downer	do	1884	.30		2					
158	Ford Creek No. 1	Ford Creek	1884	.50		2					
159	Tuttle Creek No. 2	Tuttle Creek	1884	.30		2					
160	Baxter Creek No. 3	Baxter Creek	1884	.20		2					
161	Sheep Creek	Sheep Creek	1884	3.20		4					
162	Kirkendall & Rambo	Saguache Creek	1885	1.60		2					
163	Harence No. 1	Mill Creek	1886	2.00		3	15	1	30	30	
164	Harence No. 2	do	1886	2.00		4	15	1	30	30	
165	Harence No. 3	do	1886	2.00		6	15	1	30	30	
166	Carter No. 4	Saguache Creek	1886	.80		1					
167	Bulen No. 1	do	1886	2.40		4	5	3	30	160	
168	Bulen No. 2	do	1886	.50		4					
169	Phillips No. 1	do	1887	2.40		5					
170	Phillips No. 2	do	1887	.40		6					
171	Kirkendall No. 2	do	1887	.80		1					
172	Fry	do	1887	1.00		9					
173	North Houghland	do	1887	.50		4					
174	Union	do	1887	.50		12					
175	Ziegler	do	1887	10.00		45					
176	Commodore	Saguache Creek	1887	3.60		6					
177	Joys	do	1887-1888	1.80		2					1887, 1; 1888, 0.80.
178	Frieze, No. 2	do	1887	1.00		2	18	1	36	50	
179	Uddell & Means	do	1887	2.00		14	5	7	70	150	
180	Hodding, No. 1	do	1887	.70		2	15	2	60	140	
181	Miely	do	1888	4.50		6					
182	Sheck	do	1888	1.20		2					
183	Connard	do	1888	.40		8					
184	Farrington, No. 2	do	1888	.40		5					
	Total			561.76		1,509			16,170	20,205	

a These returns defective. See report for explanation of these tables.

List of ditches in District No. 27, Colorado.

No.	Name.	Stream.	Date of first use.	Decree.	Possible acreage.	Capacity.	1896.				Remarks.
							Days.	Per day.	Acre-feet.	Acres.	
1	La Loma	Carnero Creek	1870	.26	100	2	90	1	180	100	
2	Madre	do	1870	2.21	60	9	90	1.5	270	60	
3	Angostura	do	1870	1.04	60	2.8	90	1	180	30	
4	La Isla	do	1870	1.30	40	2.8	90	1	180	40	
5	Biedell No. 10	La Garita Creek	1870	1.95	310	13.8	80	2	320	13	
6	La Vega	Carnero Creek	1870	.52	60	2.8	60	0.5	60	25	
7	Wilson No. 1	Carnero and La Garita creeks.	1871	1.82	160	8	80	1.5	240	100	0.52 from Cranero; 1.30 from La Garita.
	Wilson No. 2	Carnero Creek	1871	.52	60	2.8	60	0.4	48	25	
8	Wilson No. 3	do	1871	.52	60	5.5	60	0.4	48	25	
9	Biedell No. 2	La Garita Creek	1871	.78	125	13.8	80	0.8	128	45	
10	La Magoties	Carnero Creek	1871	1.82	220	5.8					No return in 1896.
11	Beaver	do	1872	1.30	70	8	90	1	180	35	
12	Biedell No. 5	La Garita Creek	1872	.65	100	11	80	0.6	96	40	
13	Romero	do	1872	.65	120	1.5					No return in 1896.
14	Biedell No. 1	do	1872	1.04	160	5.5	80	1	160	65	
15	Wilson No. 4	Carnero Creek	1872	2.60	300	7	60	2	240	120	
16	Green No. 7	do	1873	.65	55	0.8	70	0.5	70	25	
17	Manuel	La Garita Creek	1873	.78	80	0.8	80	0.6	95	60	
18	McLeod No. 1	do	1873	.40	40	1	70	0.6	84	30	
19	McLeod No. 2	do	1873	.40	40	1	70	0.6	84	30	
20	Niggar	do	1874	1.04	110	1.1	60	1	120	40	
21	Cerro	Carnero Creek	1874	.39	110	4	90	0.4	72	40	
22	Middle	La Garita Creek	1874	.52	60	1	70	0.4	55	40	
23	Home No. 1	do	1875	1.30	150	2	70	1	140	80	
24	Garcia	do	1875	.52	160	1	80	1	160	160	
25	Biedell, No. 7	La Garita Creek	1875	.78	125	8	80	0.8	130	45	
26	Du Bois	do	1875	1.04	110	2	70	1	140	60	
27	Biedell No. 4	do	1877	.78	125	5.5	80	0.8	128	45	
28	Stewart No. 4	do	1878	1.04	100	2	60	0.5	60	25	
29	White No. 1	do	1878	1.30	110	1.3	60	0.5	60	30	
30	McLeod No. 3	do	1878	.65	70	0.7	70	0.7	98	70	
31	Green No. 1	Carnero Creek	1879	1.56	135	4	70	1.4	196	55	
32	Green No. 2	do	1879	.78	65	3.6	70	0.6	84	25	
33	Green No. 6	do	1879	1.04	90	1.4	70	0.9	126	35	
34	Curby No. 1	La Garita Creek	1879	.78	60	1	60	1	120	30	
35	Curby No. 2	do	1879	.78	60	1	60	1	120	30	
36	Curby No. 3	do	1879	.78	60	1	60	1	120	30	
37	Green No. 3	Carnero Creek	1879	.78	60	1	60	1	120	30	

Indian Home	do	1880	2.55	400	2.5 4	80 80	2.5 2.5	400 400	160 160	
Total			47.42	5,680	173.3			6,740	2,670	

List of ditches in District No. 35, Colorado.

[Arranged geographically down each stream. Dates of construction uncertain.]

No.	Name.	Stream.	Date of first use.	Decree. a	Capacity.	1895.		1896.		Remarks.
						Acre-feet.	Acres.	Acre-feet.	Acres.	
1	Chevallie	Trinchera Creek	Before 1880		2	320	80	240	80	
2	Private	do	do		1	80	20	60	20	
3	Redman north	do	do		2	320	80	240	80	
4	Redman south	do	do		2	320	80	240	80	
5	Hughes-Wohlstein	do	1869		2	320	80	240	80	
6	Alamos Altos	do	1889		2	320	80	240	80	
7	Steward north	do	Before 1880		1.5	320	80	240	80	
8	Steward south	do	About 1886		1.5	320	80	240	80	
9	Jerry McCarthy	do	do		2.5	560	140	420	140	
10	Meadow	do	1889		2	160	40	120	40	
11	Johnny	do	1874		2	160	40	120	40	
12	Home	do	1873		2.5	360	90	270	90	
13	Spring	do	1884		1.5	120	30	90	30	
14	Cowgill-McCarthy	do	1873		4	560	140	420	140	
15	Farm	do	Before 1880		3	320	80	240	80	
16	Cañon	do	do		4	360	90	270	90	
17	Trinchera	do	1888		100	2,100	700	1,100	550	Has never carried over 40 second-feet.
18	Overflow No. 1	do	1889		4	300	100	150	100	
19	Overflow No. 2	do	1889		4	200	100	150	100	
20	Ward	Saugre de Cristo Creek	Before 1880		2	160	40	120	40	
21	Lamy north	do	do		2	160	40	120	40	
22	Lamy south	do	do		2	160	40	120	40	
23	Vigil No. 1	do	do		3	240	60	180	60	
24	Vigil No. 2	do	do		1.5	80	20	60	20	
25	Vigil No. 3	do	do		2	80	20	60	20	
26	Vigil No. 4	Sangrede Cristo Creek	Before 1880		15	80	20	60	20	
27	Garland	do	1888		100	600	300	400	200	Has never carried over 50 second-feet.
28	Cottonwood	do	1889		3	240	80	160	80	
29	John	do	1889		3	240	80	160	80	
30	Carey	do	1890		2	120	60	120	60	
31	Mexican No. 1	Ute Creek	Before 1880		1	80	20	80	20	
32	Mexican No. 2	do	do		1	80	20	80	20	
33	Mexican No. 3	do	do		1	80	20	80	20	
34	Mexican No. 4	do	do		1	80	20	80	20	
35	Mexican No. 5	do	do		1	80	20	80	20	
36	Willing No. 1	do	do		1	80	20	80	20	

[illegible]	[illegible]	do	do		3	320	80	240	80
42	Ranch No. 1	do	do		3	320	80	240	80
43	Ranch No. 2	do	do		3	320	80	240	80
44	Ranch No. 3	do	do		3	320	80	240	80
45	Etter	do	1855		4	240	80	160	80
46	Thompson	do	Before 1880		15	960	320	640	320
47	McMillen	do	1874		9	320	160	240	160
48	Arroyo	do	Before 1880		7	240	160	160	160
	Total				346	15,020	4,430	10,410	4,180

a This district has not been adjudicated.

List of ditches in District No. 1, New Mexico—San Antonio.

Number of ditches.	Number on stream.	Name.	Stream.	When built.	Approximate location of head.	Capacity.	Total capacity.	Acres irrigated.	Acre-feet of water used.			Remarks.
									1894.	1895.	1896.	
						Sec. ft.	*Sec. ft.*					
1	1	Private	Los Pinos Creek	Before 1880	Sec. 32, T. 32 N., R. 7 E	2	2	60	240	240	240	
1	2	do	do	do	Sec. 34, T. 32 N., R. 7 E	2	2	60	240	240	240	
1	3	do	do	do	Sec. 36, T. 32 N., R. 7 E	2	2	60	240	240	240	
1	4	do	do	do	Sec. 6, T. 31 N., R. 8 E	2	2	60	240	240	240	
4	1, 2, 3, 4	Small private	San Antonio Creek	do	Sec. 11, T. 30 N., R. 7 E	a 2	8	200	800	800	800	
1	5	Upper San Antonio	North side San Antonio Creek.	do	do	5	5	200	800	800	800	
1	6	Lower San Antonio	South side San Antonio Creek.	do	Sec. 7, T. 30 N., R. 8 E	9	9	600	2,400	2,400	1,800	
1	7	Private	North side San Antonio Creek.	do	Sec. 4, T. 30 N., R. 8 E	2	2	30	120	120	90	
11		Total					32	1,270	5,080	5,080	4,450	

a Each.

Number of ditches.	Number on stream.	Name.	Stream.	When built.	Approximate location of head.	Capacity.	Total capacity.	Acres irrigated.	Acre-feet of water used.			Remarks.
									1894.	1895.	1896.	
						100 feet each.	*Second feet.*					
3	1, 2, 3	Private	Little Chama River	1892	Sec. 31, T. 32 N., R. 3 E.	*a* 10	30	500	1,500	1,500	.....	No water in 1896.
2	4, 5	....do	....do	1890	Sec. 10, T. 31 N., R. 3 E.	*a* 4	8	150	450	450	.....	Do.
1	1	Botter's	Chama River	1889	Sec. 5, T. 30 N., R. 4 E.	5	5	50	200	200	200	
1	2	Begg's	....do	1889	Sec. 9, T. 30 N., R. 4 E.	2	2	30	120	120	120	
3	3, 4, 5	Riverside	....do	1890	Sec. 17, T. 30 N., R. 4 E.	*a* 4	12	140	560	560	560	
1	6	Burns's	Canoues Creek	1880	Sec. 17, T. 30 N., R. 4 E.	24	24	410	1,230	1,230	820	Small stream.
1	7	Seth's Mill	Chama River	1878	Sec. 20, T. 30 N., R. 4 E.	36	36	610	2,440	2,440	1,830	
1	1	Los Brazos	North side Los Brazos.	1861	Sec. 23, T. 30 N., R. 4 E.	15	15	600	2,400	2,400	1,800	
1	2	Ensefiada	South side Los Brazos.	1861	Sec. 23, T. 30 N., R. 4 E.	48	48	1,500	5,600	6,000	4,500	Acreage has increased from 1,000 acres in 1893.
1	3	Parkview	....do	1861	Sec. 24, T. 30 N., R. 4 E.	60	60	2,500	10,000	10,000	7,500	Acreage has increased from 1,900 acres in 1890.
1	8	Spring	Springs along Chama River.	1870	Sec. 32, T. 30 N., R. 4 E.	5	5	250	500	500	500	
1	9	Puente Bottoms	West side Chama River.	1887	Sec. 5, T. 29 N., R. 4 E.	8	8	300	1,200	1,200	900	
3	10, 11, 12	Brood's	....do	1891	Sec. 34, T. 28 N., R. 2 E.	*a* 6	18	500	1,500	1,500	300	But 150 acres watered in 1896.
1	1	Tierra Amarilla	Nutritas Creek	1861	Sec. 17, T. 29 N., R. 5 E.	36	36	1,000	3,000	3,000	2,000	
4	2, 3, 4, 5	Private	....do	1870	Sec. 20 to 22, T. 29 N., R. 5 E	*a* 2	8	100	300	300	300	
10	1 to 10	Private above Plaza	Nutrias Creek	1860 to 1865	Sec. 1, 2, 3, T. 27 N., R. 4 E	*a* 1.5	15	400	1,200	1,200	1,000	
13	11 to 23	Private below Plaza	....do	1860 to 1865	Sec. 9, 16, 17, T. 27 N., R. 4 E	*a* 1.5	19	640	1,280	1,280	320	Crop a failure in 1896.
2	1, 2	Cebolla	Cebolla Creek	1877	Sec. 24, T. 27 N., R. 4 E.	*a* 9	18	450	900	900	670	
1	3	Cienega	Cienega Creek	1877	Sec. 36, T. 27 N., R. 4 E.	9	9	250	500	500	380	
8	4 to 11	Private	Cebolla Creek	1877 to 1879	Sec. 33, 34, 35, T. 27 N., R. 4 E	*a* 2	16	300	600	600	450	
2	12, 13	....do	Cienega Creek	1877	Sec. 31, T. 27 N., R. 5 E.	*a* 1.5	3	50	150	150	150	Springs.
1	1	West Canjilon	Conjilon Creek	1870	Sec. 3, T. 26 N., R. 5 E.	16	16	900	1,800	1,800	1,350	
1	2	Middle Canjilon	....do	1870	Sec. 9, T. 26 N., R. 5 E.	20	20	1,100	2,200	2,200	1,100	
1	3	East Canjilon	Branch of Conjilon Creek.	1870	Sec. 17, T. 26 N., R. 5 E.	8	8	400	800	700	600	
1	4	Lower Canjilon	Springs along Canjilon Creek.	1875	Sec. 11, T. 25 N., R. 4 E.	4	4	100	200	200	200	
9	1 to 9	Private	El Rito Creek above mill.	Before 1860	Sec. 11, T. 26 N., R. 6 E.	*a* 2	18	340	1,360	1,360	1,020	El Rito drainage is always short of water.

a Each.

List of ditches in District No. 2, New Mexico, Chama—Continued.

Number of ditches.	Number on stream.	Name.	Stream.	When built.	Approximate location of head.	Capacity.	Total capacity.	Acres irrigated.	Acre-feet of water used.			Remarks.
									1894.	1895.	1896.	
						100 feet each.	*Second feet.*					
2	10, 11	Mill	El Rito Creek below mill.	Before 1860.	Sec. 2-11, T. 25 N., R. 6 E.	*a* 4	8	400	1,200	1,000	800	
1	12	Acequia Madre de El Rito.	El Rito Creek	1730	Sec. 18, T. 25 N., R. 7 E.	36	36	1,600	3,200	2,700	2,400	
1	13	Lower El Rito	do	About 1800.	Sec. 3, T. 24 N., R. 7 E.	24	24	900	1,800	1,600	1,350	
4	14,15,16,17	East El Rito	do	do	Sec. 3, T. 24 N., R. 7 E.	*a* 6	24	650	1,300	1,140	970	
2	1, 2	Upper Vallecito	Vallecito Creek	Before 1860.	Sec. 14, T. 27 N., R. 7 E.	*a* 8	16	400	1,600	1,600	1,600	Caliente drainage always furnishes abundant water.
2	3, 4	Lower Vallecito	do	do	Sec. 2, T. 26 N., R. 7 E.	*a* 30	60	900	3,600	3,600	3,600	
1	5	Trehare Vallecito	do	do	Sec. 34, T. 26 N., R. 8 E.	*a* 8	8	250	1,000	1,000	1,000	
2	6, 7	Algin	do	do	Sec. 3, T. 25 N., R. 8 E.	*a* 3	6	160	640	640	640	
1	8	Ancones	do	do	Sec. 10, T. 25 N., R. 8 E.	18	18	480	1,920	1,920	1,920	
1	9	Llanito	do	do	Sec. 14, T. 25 N., R. 8 E.	8	8	200	800	800	800	
1	10	West La Cueva	do	do	Sec. 24, T. 25 N., R. 8 E.	12	12	300	1,200	1,200	1,200	
1	11	East La Cueva	do	do	Sec. 24, T. 25 N., R. 8 E.	3	3	40	160	160	160	
1	12	Private	Ojo Caliente River	do	Sec. 12, T. 24 N., R. 8 E.	4	4	60	240	240	240	
1	13	Garilan	do	do	Sec. 13, T. 24 N., R. 8 E.	40	40	1,300	5,200	5,200	5,200	
2	14, 15	Senietta	do	do	Sec. 34, T. 26 N., R. 9 E.	*a* 4	8	100	400	400	400	
2	16, 17	Las Zorras	do	do	Sec. 9, T. 25 N., R. 9 E.	*a* 2	4	40	160	160	160	
1	1	Las Tusas	Petaca Creek	do	Sec. 8, T. 28 N., R. 8 E.	4	4	100	400	400	400	
2	2, 3	Las Tablas	East Fork Petaca Creek.	do	Sec. 35, T. 28 N., R. 8 E.	*a* 3	6	160	640	640	640	
1	4	Private	Petaca Creek	do	Sec. 14, T. 27 N., R. 8 E.	2	2	60	240	240	240	
2	5, 6	Plaza Petaca	do	do	Sec. 30, T. 27 N., R. 9 E.	*a* 8	16	400	1,600	1,600	1,600	
1	1	Capulin	Gallinas River	do	Sec. 23, T. 23 N., R. 1 E.	5	5	200	400	300	200	Water supply poor.
1	2	Chavez	do	do	Sec. 14, T. 24 N., R. 1 E.	5	5	200	300	200	100	Do.
2	1, 2	Plaza Coyote	Rio Puerco	do	Sec. 18, T. 22 N., R. 3 E.	*a* 30	60	1,500	3,000	2,250	1,500	Water supply always short.
1	3	Private	do	do	Sec. 12, T. 23 N., R. 3 E.	4	4	100	200	150	100	Do.
2	1, 2	Plaza Vallecito	Vallecito Creek	do	Sec. 12, T. 22 N., R. 5 E.	*a* 5	10	300	600	600	450	Water supply sometimes short.
1	13	Private	Chama River	do	Sec. 14, T. 23 N., R. 5 E.	10	10	100	400	400	400	
1	14	do	do	do	Sec. 24, T. 23 N., R. 5 E.	6	6	80	320	320	320	
1	15	Plaza Colorado	do	1754	Sec. 10, T. 23 N., R. 6 E.	15	15	300	1,200	1,200	900	
1	16	Plaza Abiquiu	do	1739	Sec. 20, T. 24 N., R. 6 E.	28	28	560	2,240	2,240	1,680	
	17	Lobato south										

1	29	La Cuchilla	do	Before 1880.	Sec. 20, T. 22 N., R. 7 E.	25	35	500	2,000	2,000	1,500	
123		Total					1,016	27,520	86,390	84,630	65,870	

a Each.

List of ditches in District No. 3, New Mexico—Cerro Mesa.

Number of ditches.	Number on stream.	Name.	Stream.	When built.	Approximate location of head.	Capacity.	Total capacity.	Acres irrigated.	Acre feet of water used. 1894.	1895.	1896.	Remarks.
						Ft. each.	*Sec. feet.*					
2	1,2	Private	Costilla Creek	1873	T. 32 N., R. 14 E	a 12	24	650	2,600	2,600	2,600	
1	3	South Costilla Plaza	do	1856	T. 32 N., R. 13 E	12	12	300	1,200	1,200	1,200	
1	1	Cerro	Ritos del Lotir, Eu Medio, Primero and Joroso.	1852	T. 30 N., R. 13 E	12	12	2,000	2,000	2,000	1,000	
1	2	Private	Rito del Lotir	1886	T. 30 N., R. 13 E	8	8	450	450	450	230	
1	3	do	Rito Joroso	1886	T. 30 N., R. 13 E	3	3	50	50	50	20	
4	4,5,6,7	do	Rito Eu Medio	1886	T. 30 N., R. 13 E	a 2	8	120	120	120	60	
4	8,9,10,11	do	Rito Primero	1886	T. 30 N., R. 13 E	a 2	8	100	100	100	50	
1	1	Llano	Cobresto Creek	1851	Sec. 22, T. 29 N., R. 13 E	30	30	2,000	6,000	6,000	6,000	
1	2	Colorado Plaza	do	About 1842	Sec. 28, T. 29 N., R. 13 E	8	8	400	1,600	1,600	1,600	
1	3	Red River	Red River and Cobresto Creek.	do	Sec. 33, T. 29 N., R. 13 E	15	15	800	2,800	2,800	2,800	
1	4	Private	Red River	1851	Sec. 33, T. 29 N., R. 13 E	2	2	50	200	200	200	
1	5	Lower Red River	do	1851	Sec. 32, T. 29 N., R. 13 E	6	6	200	800	800	800	
1	1	Cebolla	Lerma Cañon	Before 1860	Sec. 7, T. 28 N., R. 13 E	2	2	40	100	80	60	
1	1	South San Cristobal	San Cristobal Creek	do	Sec. 30, T. 28 N., R. 13 E	8	8	400	1,200	1,200	800	
1	2	North San Cristobal	do	do	Sec. 30, T. 28 N., R. 13 E	3	3	150	450	450	300	
1	1	Lobo (see District No. 4 for Ditch No. 1 from Rio Hondo).	Lobo Creek	1884	T. 27 N., R. 12 E	6	6	200	300	300	200	
1	2	South Plaza	Rio Hondo	Before 1830	Sec. 27, T. 27 N., R. 13 E	3	3	75	300	300	300	
1	3	North Plaza	do	do	Sec. 27, T. 27 N., R. 13 E	10	10	320	1,280	1,280	1,280	
1	4	Private	do	do	Sec. 31, T. 27 N., R. 13 E	3	3	75	300	300	300	
1	5	Rio Hondo, north	do	do	Sec. 36, T. 27 N., R. 12 E	8	8	300	1,200	900	900	
1	6	Rio Hondo, south	do	do	Sec. 36, T. 27 N., R. 12 E	15	15	600	2,400	1,800	1,800	
28		Total					194	9,280	25,450	24,530	22,500	

a Each.

Ditches in District No. 4, New Mexico—Taos Mesa.

Number of ditches.	Number on stream.	Name.	Stream.	When built.	Approximate location of head.	Capacity.	Total capacity.	Acres irrigated.	Acre feet of water used.			Remarks.
									1894.	1895.	1896.	
						Sec. feet.	*Sec. feet.*					
1	1	Mesa	Rio Hondo	1830	Sec. 27, T. 27 N., R. 13 E.	30	30	1,500	4,500	4,500	4,500	
1	1	Arroyo Seco	Lucero and Seco creeks.	Before 1830	Sec. 11, T. 26 N., R. 13 E.	12	12	1,200	2,400	2,400	1,200	
1	2	Las Colomo	Seco Creek	1886	Sec. 7, T. 26 N., R. 13 E.	4	4	300	450	450	150	
1	2	East Lucero	Lucero Creek	Pueblo (very old).	Sec. 16, T. 26 N., R. 13 E.	3	3	120	240	240	180	
1	3	West Lucero	do	About 1850	Sec. 16, T. 26 N., R. 13 E.	4	4	160	320	320	240	
2	4, 5	Middle Lucero	do	Pueblo (very old).	Sec. 28, T. 26 N., R. 13 E.	a 3	6	240	480	480	360	
1	6	Mexican	do	About 1850	Sec. 5, T. 25 N., R. 13 E.	3	3	120	240	240	180	
8	7 to 14	Indian	Pueblo Creek, above Pueblo.	Pueblo (very old).	Sec. 5, T. 25 N., R. 13 E.	a 3	24	960	1,920	1,920	1,440	
1	15	do	Pueblo Creek, below Pueblo.	do	Sec. 5, T. 25 N., R. 13 E.	3	3	120	240	240	180	
1	16	Main	Pueblo Creek	Before 1850	Sec. 9, T. 25 N., R. 13 E.	12	12	720	1,440	1,440	1,080	
10	17 to 26	Private	do	do	Sec. 9, T. 25 N., R. 12 and 13 E.	a 5	50	3,000	4,500	4,500	3,000	
18	1 to 18	Private, up cañon	Toos Creek	About 1860	Sec. 9, T. 25 N., R. 13 and 14 E.	a 2	36	540	2,160	2,160	2,160	
2	19, 20	Fernandez de Taos	do	About 1800	Sec. 22, T. 25 N., R. 13 E.	a 15	30	1,500	4,500	4,500	2,250	
2	21, 22	Private	Springs in Taos Creek.	Before 1860	Sec. 18, T. 25 N., R. 13 E.	a 4	8	400	800	800	800	
1	1	La Acequia del Llana	Ranches de Taos Creek.	do	Sec. 18, T. 24 N., R. 13 E.	15	15	800	2,400	2,400	1,600	
1	2	La Acequia del Rio Grande.	do	do	Sec. 18, T. 24 N., R. 13 E.	30	30	1,800	5,400	5,400	3,600	
1	3	Del Medios del Rios	do	do	Sec. 12, T. 24 N., R. 12 E.	4	4	200	600	600	400	
1	4	Torres	do	do	Sec. 12, T. 24 N., R. 12 E.	4	4	200	600	600	400	
1	5	Hart	do	do	Sec. 36, T. 25 N., R. 12 E.	14	14	800	2,400	2,400	1,600	
4	6, 7, 8, 9	Private	do	do	Sec. 36, T. 25 N., R. 12 E.	a 2	8	120	360	360	240	
1	10	North Chiquito	Rio Chiquito	do	Sec. 7, T. 24 N., R. 13 E.	40	40	3,000	9,000	9,000	6,000	
1	11	South Chiquito	do	do	Sec. 7, T. 24 N., R. 13 E.	6	6	250	750	750	500	
61		Total					346	18,050	45,700	45,700	32,060	

a Each.

Number of ditches.	Number on stream.	Name	Stream.	When built.	Approximate location of head.	Capacity.	Total capacity.	Acres irrigated.	Acre-feet of water used. 1894	1895	1896	Remarks.
						Sec. ft.	*Sec. ft.*					
1	1	Mora	Head of Picuris Creek.	1880	T. 22 N., R. 13 E	16	16	960	2,880	2,880	2,880	Diverts water to Pecos drainage.
1	2	Mora Enlargement	do	1890	T. 22 N., R. 13 E	16	16	960	2,880	2,880	2,880	Do.
7	3 to 9	Private	Cañon of Picuris Creek.	Before 1880	T. 22 N., R. 12 and 13 E	*a* 2	14	140	560	560	560	
1	10	South Rio Pueblo Plaza.	Picuris Creek	Before 1840	Sec. 8, T. 22 N., R. 13 E	12	12	480	1,200	1,200	960	
1	11	North Rio Pueblo Plaza.	do	do	Sec. 6, T. 22 N., R. 13 E	6	6	240	600	600	480	
1	12	Private	South side Picuris Creek.	do	Sec. 1, T. 22 N., R. 12 E	6	6	240	600	600	480	
1	13	do	North side Picuris Creek.	do	Sec. 1, T. 22 N., R. 12 E	6	6	240	600	600	480	
1	14	Picuris Pueblo	do	Pueblo, very old.	Sec. 29, T. 23 N., R. 12 E	12	12	480	1,200	1,200	960	
1	15	do	South side Picuris Creek.	do	Sec. 29, T. 23 N., R. 12 E	8	8	300	750	750	600	
1	1	Chamizal	Peñasco Creek	About 1815	Sec. 22, T. 22 N., R. 12 E	30	30	1,200	3,600	3,600	3,600	Carried over a low divide to a side valley.
1	2	Llano San Juan	do	do	Sec. 21, T. 22 N., R. 12 E	20	20	700	2,100	2,100	2,100	
1	3	Llano de la Tegua	do	do	Sec. 21, T. 22 N., R. 12 E	10	10	350	1,050	1,050	1,050	
1	4	Santa Barbara	do	do	Sec. 9, T. 22 N., R. 12 E	10	10	350	1,050	1,050	1,050	
1	5	Peñasco Plaza	do	do	Sec. 5, T. 23 N., R. 12 E	5	5	180	540	540	540	
4	6, 7, 8, 9	Private	do	do	Sec. 31-36, T. 23 N., R. 12 E	*a* 5	20	500	1,500	1,500	1,500	
2	1, 2	Las Trampos Plaza	Las Trampos Creek	do	T. 22 N., R. 12 E	5	10	400	1,200	1,200	800	
1	3	Ojo Zarco	do	do	T. 22 N., R. 11 E	6	6	400	800	800	600	Carried over a divide to Ojo Zarco Valley.
1	1	Upper Embudo	Embudo Creek	do	Sec. 36, T. 23 N., R. 10 E	6	6	210	630	630	630	
1	2	Middle Embudo	do	do	Sec. 35, T. 23 N., R. 10 E	4	4	140	420	420	420	
1	3	Lower Embudo	do	do	Sec. 34, T. 23 N., R. 10 E	3	3	100	300	300	300	
1	4	North Embudo	do	do	Sec. 35, T. 23 N., R. 10 E	10	10	350	1,050	1,050	1,050	
1	5	La Junta	do	do	Sec. 20, T. 23 N., R. 10 E	6	6	200	600	600	600	
32		Total					236	9,120	26,110	26,110	24,520	

a Each.

List of ditches in District No. 6, New Mexico—Santa Cruz.

Number of ditches.	Number on stream.	Name.	Stream.	When built.	Approximate location of head.	Capacity.	Total capacity.	Acres irrigated.	Acre-feet of water used.			Remarks.
									1894.	1895.	1896.	
						Sec. ft.	*Sec. ft.*					
1	1	Las Truches	Las Truches Creek	Before 1840	T. 21 N., R. 11 E	6	6	200	600	600	400	
2	1, 2	Private	Santa Cruz River	do	T. 20 N., R. 9 E	*a* 4	8	200	800	800	800	
2	3, 4	Chimayo	do	do	T. 20 N., R. 9 E	12	24	1,000	3,000	3,000	3,000	
1	1	Bishops	Tusugue Creek	do	T. 18 N., R. 10 E	6	6	200	600	600	600	
6	2 to 7	Private	do	do	T. 18 N., R. 9 E	*a* 2	12	400	800	800	600	
2	8, 9	Tusugue Pueblo	do	Pueblo (very old).	Sec. 15, T. 18 N., R. 9 E	*a* 5	10	300	600	600	450	
2	10, 11	Private	do	Old	T. 19 N., R. 9 E	*a* 3	6	100	200	200	150	
6	12 to 17	Cuyamaugue	do	do	T. 19 N., R. 9 E	*a* 2	12	500	1,000	1,000	750	Partially from springs.
3	18, 19, 20	Private	do	do	Sec. 18, T. 19 N., R. 9 E	*a* 2	6	100	150	150	100	
4	1, 2, 3, 4	do	Nambè Creek	do	Sec. 18, T. 19 N., R. 9 E	*a* 2	8	100	300	300	300	
1	5	Nambè Pueblo	do	Pueblo (very old).	Sec. 14, T. 19 N., R. 9 E	6	6	200	600	600	400	
4	6, 7, 8, 9	Nambè Pueblo farms	do	do	Sec. 10, T. 19 N., R. 9 E	*a* 2	8	100	300	300	200	
1	10	Main Pojuaque Pueblo.	Pojuaque (Nambè) Creek.	do	Sec. 10, T. 19 N., R. 9 E	10	10	600	1,500	1,500	900	
1	11	South Pojuaque Pueblo.	do	do	Sec. 9, T. 19 N., R. 9 E	6	6	360	900	900	540	
1	12	Lower Pojuaque Pueblo.	do	do	Sec. 8, T. 19 N., R. 9 E	4	4	240	600	600	360	
6	13 to 18	Private	do	Old	T. 19 N., R. 8 E	*a* 4	24	1,200	1,800	1,800	900	
43		Total					156	5,800	13,750	13,750	10,450	

a Each.

Number of ditches.	Number on stream.	Name.	Stream.	When built.	Approximate location of head.	Capacity.	Total capacity.	Acres irrigated.	Acre-feet of water used.		
									1894.	1895.	1896.
						Sec. feet.	*Sec. feet.*				
1	1	Private, in cañon	Santa Fe Creek	Probably before 1800	T. 17 N., R. 10 E	2	2	100	300	300	300
2	2,3	do	do	do	T. 17 N., R. 10 E	*a* 1	2	100	250	250	200
2	4,5	do	do	do	T. 17 N., R. 10 E	2	4	200	320	320	250
1	6	Private, at reservoir	North side Santa Fe Creek.	do	T. 17 N., R. 10 E	2	2	100	160	160	125
1	7	do	South side Santa Fe Creek.	do	Sec. 20, T. 17 N., R. 10 E	3	3	150	240	240	190
1	8	do	North side Santa Fe Creek.	do	Sec. 20, T. 17 N., R. 10 E	2	2	100	160	160	125
1	9	do	South side Santa Fe Creek.	do	Sec. 20, T. 17 N., R. 10 E	2	2	100	160	160	125
1	10	do	North side Santa Fe Creek.	do	Sec. 19, T. 17 N., R. 10 E	1	1	50	80	80	60
1	11	Acequia Madre	South side Santa Fe Creek.	1600	Sec. 19, T. 17 N., R. 10 E	14	14	900	1,440	1,440	1,025
1	12	Private	North side Santa Fe Creek.	Probably before 1800	Sec. 19, T. 17 N., R. 10 E	3	3	150	240	240	190
1	13	do	South side Santa Fe Creek.	do	Sec. 19, T. 17 N., R. 10 E	2	2	100	160	160	125
2	14,15	do	North and south sides Santa Fe Creek.	do	Sec. 19, T. 17 N., R. 10 E	*a* 2	4	200	320	320	250
1	16	do	North side Santa Fe Creek.	do	Sec. 24, T. 17 N., R. 9 E	2	2	100	160	160	125
1	17	do	South side Santa Fe Creek.	do	Sec. 24, T. 17 N., R. 9 E	3	3	150	240	240	190
2	18,19	do	North side Santa Fe Creek.	do	Sec. 24, T. 17 N., R. 9 E	*a* 2	4	200	320	320	250
1	20	do	South side Santa Fe Creek.	do	Sec. 23, T. 17 N., R. 9 E	3	3	150	240	240	190
2	21,22	do	North side Santa Fe Creek.	do	Sec. 23, T. 17 N., R. 9 E	*a* 2	4	200	320	320	250
1	23	Upper Agua Fria	South side Santa Fe Creek.	do	Sec. 26, T. 17 N., R. 9 E	8	8	400	640	640	500
3	24,25,26	Private	North side Santa Fe Creek.	do	Sec. 27, T. 17 N., R. 9 E	*a* 2	6	300	480	480	375
2	27,28	do	North and south sides Santa Fe Creek.	do	Sec. 27, T. 17 N., R. 9 E	1	2	100	160	160	125
1	29	Lower Agua Fria	South side Santa Fe Creek.	do	Sec. 32, T. 17 N., R. 9 E	6	6	300	480	480	375
1	30	Private	do	do	Sec. 31, T. 17 N., R. 9 E	1	1	50	80	80	60

a Each.

List of ditches in District No. 7, New Mexico—Santa Fe—Continued.

Number of ditches.	Number on stream.	Name.	Stream.	When built.	Approximate location of head.	Capacity.	Total capacity.	Acres irrigated.	Acre-feet of water used.		
									1894.	1895.	1896.
						Sec. feet.	*Sec. feet.*				
1	31	Private	South side Santa Fe Creek.	Probably before 1800	Sec. 31, T. 17 N., R. 9 E.	4	4	200	320	320	250
1	32	do	North side Santa Fe Creek.	do	Sec. 6, T. 16 N., R. 9 E.	2	2	100	160	160	125
1	33	Cieneguilla	Springs along Santa Fe Creek.	Old	Sec. 30, T. 16 N., R. 8 E.	1	1	40	80	80	80
2	34, 35	Golandrina	Springs along Golandrina Creek.	do	Sec. 33, T. 16 N., R. 8 E.	a 2	4	160	320	320	320
1	36	Private	do	do	Sec. 33, T. 16 N., R. 8 E.	2	2	100	200	200	200
1	37	do	do	do	Sec. 32, T. 16 N., R. 8 E.	3	3	150	300	300	300
1	38	do	Golandrina Creek	do	Sec. 6, T. 15 N., R. 8 E.	2	2	50	100	100	100
1	39	Upper Bonanza	Alamo Wash	do	Sec. 8, T. 15 N., R. 8 E.	2	2	150	300	300	150
2	40, 41	Middle Bonanza	do	do	Sec. 8, T. 15 N., R. 8 E.	a 2	4	300	600	600	300
1	42	Lower Bonanza	Springs in Alamo Wash.	do	Sec. 18, T. 15 N., R. 8 E.	2	2	150	300	300	150
1	43	Private	Santa Fe Creek	do	Sec. 2, T. 15 N., R. 7 E.	1	1	20	60	60	60
1	44	La Bajada	do	do	Sec. 7, T. 15 N., R. 7 E.	10	10	300	900	900	600
44		Total					117	5,920	10,590	10,590	8,040

a Each.

NOTE.—The acreage watered from Santa Fe Creek is said to be about the same now as for 18 years past. If there is any change the area has decreased.

List of ditches in Bernalillo County, New Mexico—Continued.

Number of ditches.	Number on stream.	Name.	Stream.	When built.	Approximate location of head.	Capacity.	Total capacity.	Acres irrigated.	Acre-feet of water used.			Remarks.
									1894.	1895.	1896.	
						Sec. feet.	*Sec. feet.*					
6	1 to 6	Private	Galisteo Creek	Old	T. 15 N., R. 10 E	*a* 2	12	300	900	900	600	
2	7, 8	Colorado Plaza	do	do	Sec. 17, T. 14 N., R. 10 E.	*a* 2	4	100	200	200	150	
1	9	San Cristobal	Arroyo San Cristobal	do	Sec. 28, T. 14 N., R. 10 E.	2	2	100	150	150	100	
2	10, 11	Galisteo Plaza	Galisteo Creek	do	Sec. 25, T. 14 N., R. 9 E.	*a* 5	10	400	800	800	400	
1	12	Ortiz	do	do	Sec. 5, T. 13 N., R. 9 E.	2	2	60	90	90	60	
2	13, 14	Cerrillas	do	do	Sec. 20, T. 14 N., R. 8 E.	*a* 2	4	100	200	200	200	Springs.
1	1	Tijon	Tijon Arroyo	do	T. 13 N., R. 6 E	2	2	80	160	160	120	Do.
1	1	Placitos Plaza	Placitos Arroyo	do	T. 13 N., R. 6 E	4	4	200	300	300	200	Do.
2	1, 2	San Antonito	Tijeras Cañon	do	T. 11 N., R. 6 E	*a* 4	8	400	800	800	600	
3	3, 4, 5	Private	do	do	T. 10 N., R. 5 E	*a* 2	6	200	300	300	200	
2	6, 7	San Antonio	do	do	T. 10 N., R. 5 E	*a* 3	6	300	450	450	300	
23		Total					60	2,240	4,350	4,350	2,930	

a Each.

List of ditches in District No. 9, New Mexico—Jemez.

Number of ditches.	Number on stream.	Name.	Steam.	When built.	Approximate location of head.	Capacity.	Total capacity.	Acres irrigated.	Acre-feet of water used.		
									1894.	1895.	1896.
						Sec. ft.	*Sec. ft.*				
1	1	Guadalupe Main	West side Guadalupe Creek.	Before 1800	Sec. 36, T. 18 N., R. 1 E	16	16	800	3,200	3,200	2,400
3	2, 3, 4	Private	East side Guadalupe Creek.	do	T. 17 N., R. 2 E	a 4	12	520	2,080	2,080	1,560
3	1, 2, 3	do	Cebolla Creek	1884	Secs. 3-10, T. 19 N., R. 2 E.	a 2	6	200	800	800	800
2	1, 2	Vallecito de Los Indios.	Springs	1882	Secs. 11-12, T. 18 N., R. 3 E.	a 2	4	100	300	250	200
1	1	Private	Jemez River	1888	Sec. 17, T. 19 N., R. 3 E	2	2	80	320	320	320
1	2	do	do	Before 1874	Sec. 12, T. 18 N., R. 2 E	2	2	50	200	200	200
6	3 to 8	Archuleta Valley	do	Before 1866	Secs. 23-27, T. 18 N., R. 2 E.	a 2	12	640	2,560	2,560	2,560
2	9, 10	Private	do	Before 1800	Sec. 28, T. 17 N., R. 2 E	a 2	4	100	400	400	400
1	11	Upper Jemez Pueblo.	West side Jemez River.	Pueblo; very old	Sec. 32, T. 17 N., R. 2 E	20	20	1,200	4,800	4,800	3,600
1	12	do	East side Jemez River.	do	Sec. 32, T. 17 N., R. 2 E	12	12	500	2,000	2,000	1,500
1	13	Lower Jemez Pueblo	do	do	Sec. 17, T. 16 N., R. 2 E	12	12	400	1,600	1,600	1,200
2	1, 2	Private	Vallecito Viejo	Before 1800	Sec. 12, T. 16 N., R. 2 E	a 4	8	300	600	500	450
2	14, 15	San Ysedro	West side Jemez River.	do	Sec. 20, T. 16 N., R. 2 E	a 6	12	600	1,500	1,200	900
1	16	Zia Pueblo	do	Pueblo; very old	Sec. 21, T. 15 N., R. 2 E	9	9	300	450	300	150
27		Total					131	5,790	20,810	20,210	16,240

a Each.

Ditches.	Stream.	Name.	[illegible]	[illegible]	of head.	ity.	[illegible] ity.	[illegible] gated.	1894.	1895.	1896.	[illegible]
						Sec. ft.	*Sec. ft.*					
1	1	San Jose	San Jose Creek	1872	Sec. 15, T. 22 N., R. 1 W	1	1	10	20	20	20	
1	1	La Java	La Java Creek	1872	Sec. 6, T. 21 N., R. 1 W	8	8	600	900	900	600	
2	1,2	Los Pinos	Los Pinos Creek	1872	Sec. 4, T. 21 N., R. 1 W	*a* 2	4	150	150	150	100	
2	1,2	Cuba—east and west.	Rio Puerco	1872	Sec. 7, T. 21 N., R. 1 W	*a* 12	24	1,000	1,500	1,500	1,000	
2	1,2	Rito La Leche	Rito La Leche	1872	Sec. 22, T. 21 N., R. 1 W	*a* 2	4	250	250	250	200	
5	1 to 5	Copper City	Rito del Nocimiento	1872	Sec. 26, T. 21 N., R. 1 W	*a* 2	10	350	700	700	520	
1	3	Private	Rio Puerco	1872	Sec. 32, T. 21 N., R. 1 W	3	3	180	270	270	180	
1	4	do	do	1872	Sec. 32, T. 21 N., R. 1 W	6	6	350	450	450	350	
1	5	La Ventana	do	1872	Sec. 31, T. 19 N., R. 1 W	4	4	200	200	200	200	
1	6	La Tijeras	do	1872	Sec. 22, T. 17 N., R. 2 W	6	6	600	600	600	600	
2	7,8	Cabezon	do	1872	Sec. 6, T. 16 N., R. 2 W	*a* 3	6	200	200	200	200	
1	9	Private	do	1872	Sec. 12, T. 16 N., R. 2 W	4	4	170	170	170	150	
1	10	Santa Clara	do	1872	Sec. 24, T. 15 N., R. 3 W	6	6	250	250	250	200	
1	11	Acequia de la Glorieta.	do	1872	Sec. 25, T. 15 N., R. 3 W	20	20	300	300	300	220	
1	12	Acequia Guadalupe.	do	1872	Sec. 25, T. 15 N., R. 3 W	9	9	100	100	100	80	
1	13	Commune de Salazar.	do	1872	Sec. 35, T. 15 N., R. 3 W	36	36	500	500	500	380	
1	14	Acequia del Cochino.	do	1872	Sec. 35, T. 15 N., R. 3 W	42	42	600	450	450	300	
1	15	Private	do	Old	Sec. 31, T. 7 N., R. 2 W	4	4	150	120	120	70	
2	1,2	Juan Tafoya Plaza	Springs	Before 1800	T. 13 N., R. 4 W	*a* 4	8	200	300	300	300	
1	1	Mokino	East Fork Cebolletta Creek.	do	T. 11 N., R. 5 W	2	2	50	100	100	70	Springs.
2	2,3	Cebolletta	Middle Fork Cebolletta Creek.	do	T. 11 N., R. 5 W	*a* 3	6	250	750	750	750	Do.
3	4,5,6	Cebollettita	West Fork Cebolletta Creek.	do	T. 11 N., R. 5 W	*a* 2	6	400	600	600	400	
4	1 to 4	Pajuate	Pajuate Creek	Before 1870	T. 11 N., R. 5 W	*a* 3	12	600	1,500	1,500	1,200	
2	1,2	San Mateo	San Mateo Springs	1868	T. 13 N., R. 8 W	*a* 4	8	700	1,400	1,400	1,050	
1	1	San Miguel	San Miguel Spring	1868	T. 13 N., R. 8 W	3	3	200	400	400	300	
4	1,2,3,4	Private	Bluewater (San Jose)	1880	T. 12 N., R. 13 W	*a* 2	8	150	450	450	450	
3	1,2,3	do	Gallinas Creek	1880	T. 10 N., R. 12 W	*a* 2	6	320	960	960	960	
2	1,2	do	Tenaja Creek	1880	T. 9 N., R. 12 W	*a* 2	4	100	300	300	300	
2	5,6	Bluewater Land and Irrigation Co.	Bluewater Creek and Reservoir.	1895	Sec. 8, T. 12 N., R. 11 W	*a* 75	150	1,600	600	3,200	900	See note below.
1	1	San Rafael	Ojo del Gollo	1870	Sec. 3, T. 10 N., R. 10 W	12	12	600	1,200	1,200	900	

a Each.

List of ditches in District No. 10, New Mexico, Puerco—Continued.

Number of ditches.	Number on stream.	Name.	Stream.	When built.	Approximate location of head.	Capacity.	Total capacity.	Acres irrigated.	Acre-feet of water used.			Remarks.
									1894.	1895.	1896.	
						Sec. ft.	*Sec. ft.*					
1	7	Upper Acoma	Rio San Jose (Bluewater).	Pueblo, very old.	Sec. 29, T. 10 N., R. 8 W.	12	12	250	750	750	500	
2	8, 9	Lower Acoma and Laguna.	Rio San Jose	do	Sec. 30, T. 10 N., R. 7 W.	*a* 36	72	4,000	10,000	10,000	4,000	
1	1	Rincoñada	Rincoñada Creek	Before 1860	Sec. 35, T. 11 N., R. 8 W.	5	5	300	750	750	600	
1	1	San Jose Viejo	Rito del San Jose	do	Sec. 4, T. 10 N., R. 7 W.	5	5	300	750	750	600	
1	1	Cubero	Cañon del Agua	Before 1800	Sec. 1, T. 10 N., R. 7 W.	20	20	1,000	1,500	1,500	1,000	
1	1	Enseñada	Enseñada Creek and Springs.	do	T. 10 N., R. 6 W.	5	5	300	600	600	450	
1	10	Ranchos Colorado	Rio San Jose	Pueblo, very old.	Sec. 2, T. 9 N., R. 5 W.	24	24	500	750	750	250	
1	11	El Rito	do	Before 1800	Sec. 18, T. 9 N., R. 4 W.	15	15	600	600	600	300	
62		Total					580	18,380	31,390	33,990	20,650	

a Each.

NOTE.—Prior to 1895, 200 acres was watered by an old ditch. Reservoir was built in 1894, and 1,600 acres watered in 1895, 600 in 1896. Company owns 2,000 acres, and 5,000 acres of good land can be watered from their ditches.

ditches.	stream.				of head.	ity.	ity.	gated.	1894.	1895.	1896.	
						Sec. ft.	*Sec. ft.*					
2	1,2	Private	Alamocito Creek	Before 1880	T. 2 N., R. 6 W	*a* 3	6	300	300	300	150	Always poor water supply.
2	3,4	Santa Rita	Rio Salado	Old	Sec. 14, T. 2 N., R. 4 W	*a* 4	8	300	300	300	150	Do.
5	1 to 5	Cañada de Alamosa	Rio Alamosa	Before 1864	Ts. 10 and 11 S., R. 6 W	*a* 4	20	600	1,200	1,200	900	
3	1,2,3	Private	Rio Cuchilla Negra	do	T. 12 S., R. 8 W	*a* 3	9	200	600	600	400	
1	4	Cuchilla Negra	do	do	Sec. 24, T. 12 S., R. 6 W	6	6	300	450	450	450	
1	1	Los Palomas	Springs in Rio Palomas.	1862	T. 13 S., R. 6 W	12	12	360	540	540	540	
7	1 to 7	Private	Springs in Rio Los Animos.	1878	T. 15 S., R. 6 W	*a* 2	14	250	500	500	500	
2	1,2	do	Springs in Rio Perches.	1879	Sec. 15, T. 16 S., R. 7 W	*a* 2	4	100	100	100	100	
2	1,2	do	Springs in Cienega Apocle.	1870	Sec. 31, T. 16 S., R. 6 W	*a* 2	4	60	120	120	120	
1	1	do	Springs in Berenda Wash.	1875	Sec. 12, T. 18 S., R. 7 W	2	2	80	160	160	160	
26		Total					85	2,550	4,270	4,270	3,470	

a Each.

List of ditches in District No. 12, New Mexico, Española Valley.

Number of ditches.	Number on stream.	Name.	Stream.	When built.	Approximate location of head.	Capacity.	Total capacity.	Acres irrigated.	Acre-feet of water used.			Remarks.
									1894.	1895.	1896.	
						Sec. ft.	*Sec. ft.*					
2	1-2	Creniguilla	Springs on Rio Grande	About 1815	Sec. 29, T. 24 N., R. 11 E.	a 2	4	100	260	260	260	
1	3	Rincouada	East side Rio Grande	1815	Sec. 12, T. 23 N., R. 10 E.	6	6	180	720	720	720	
1	4	West Rincoñada	West side Rio Grande	About 1815	Sec. 11, T. 23 N., R. 10 E.	4	4	100	400	400	400	
1	5	La Bolsa	East side Rio Grande	do	Sec. 21, T. 23 N., R. 10 E.	3	3	50	200	200	200	
1	6	Canova	West side Rio Grande	do	Sec. 3, T. 22 N., R. 9 E.	7	7	250	1,000	1,000	1,000	
1	7	Los Chicos	East side Rio Grande	Old	Sec. 3, T. 22 N., R. 9 E.	5	5	250	1,000	1,000	1,000	
1	8	La Joya del Medio.	do	do	Sec. 3, T. 22 N., R. 9 E.	15	15	900	3,600	3,600	3,600	
1	9	Al Bosque	West side Rio Grande	do	Sec. 20, T. 22 N., R. 9 E.	7	7	280	1,120	1,120	1,120	
2	10, 11	Private	do	do	Sec. 30, T. 22 N., R. 9 E.	a 3	6	200	800	800	800	
1	12	La Estoca	do	do	Sec. 30, T. 22 N., R. 9 E.	7	7	280	1,120	1,120	1,120	
1	13	Private	East side Rio Grande	do	Sec. 21, T. 22 N., R. 9 E.	4	4	200	800	800	800	
1	14	Alcalde	do	Probably 1600.	Sec. 30, T. 22 N., R. 9 E.	30	30	1,500	6,000	6,000	6,000	
1	15	San Juan Pueblo	do	Pueblo, very old.	Sec. 35, T. 22 N., R. 8 E.	30	30	1,500	6,000	6,000	6,000	
1	16	Chamita	West side Rio Grande	Old	Sec. 35, T. 22 N., R. 8 E.	6	6	240	960	960	960	
1	24	San Jose	Chama River	do	Sec. 32, T. 22 N., R. 8 E.	65	65	2,000	6,000	6,000	4,000	
1	25	Chamita	do	Probably 1600.	Sec. 32, T. 22 N., R. 8 E.	60	60	1,800	3,900	3,900	2,600	
1	26	Salazar	do	Before 1800.	Sec. 5, T. 21 N., R. 8 E.	35	35	960	2,880	2,880	1,920	
1	5	Upper, on south side.	Santa Cruz River	Old	Sec. 8, T. 20 N., R. 9 E.	4	4	200	600	600	400	Watered 400 acres prior to 1885 (capacity 8 second feet).
1	6	Middle, on south side.	do	do	Sec. 12, T. 20 N., R. 9 E.	6	6	300	600	600	450	
1	7	Kitchener, on south side.	do	do	Sec. 12, T. 20 N., R. 9 E.	6	6	300	600	600	450	
1	8	Private, on south side.	do	do	Sec. 2, T. 20 N., R. 8 E.	3	3	100	200	200	150	
1	9	Santa Cruz Plaza, north.	do	1609	Sec. 6, T. 20 N., R. 9 E.	36	36	1,100	2,200	2,200	1,650	
1	10	Private, north	do	Old	Sec. 1, T. 20 N., R. 8 E.	12	12	350	700	700	530	
1	11	do	do	do	Sec. 2, T. 20 N., R. 8 E.	5	5	100	200	200	150	
1	17	Hobart	East side Rio Grande		Sec. 22, T. 20 N., R. 8 E.	10	10	100	200	300	300	Built in 1893, but covers land formerly watered by Santa Cruz, No. 5.
1	18	Santa Clara	West side Rio Grande	Pueblo, very old.	Sec. 15, T. 20 N., R. 8 E.	6	6	200	800	800	800	
2	1, 2	do	Santa Clara Creek	do	Sec. 9, T. 20 N., R. 8 E.	a 6	12	300	600	600	300	

		fonso.										
32		Total					406	14,060	44,180	44,280	38,040	

a Each.

List of ditches in District No. 13, New Mexico—Upper Albuquerque.

Number of ditches.	Number on stream.	Name.	Stream.	When built.	Approximate location of head.	Capacity.	Total capacity.	Acres irrigated.	Acre-feet of water used.			Remarks.
									1894.	1895.	1896.	
						Sec. ft.	*Sec. ft.*					
2	19, 20	Cochiti Pueblo	East and west side Rio Grande.	Pueblo, very old	Sec. 18, T. 16 N., R. 6 E.	*a* 12	24	450	1,800	1,800	1,800	
1	21	Pena Blanca	East side Rio Grande	Before 1800	Sec. 18, T. 16 N., R. 6 E.	22	22	850	3,400	3,400	3,400	
1	22	Santo Domingo	do	Pueblo, very old	Sec. 36, T. 16 N., R. 6 E.	6	6	200	800	800	800	
2	23, 24	Santo Domingo, Lower.	do	do	Sec. 23, T. 15 N., R. 5 E.	*a* 4	8	200	800	800	800	
1	25	Sill	West side Rio Grande	About 1820	Sec. 35, T. 16 N., R. 5 E.	5	5	200	800	800	600	
2	26, 27	San Felipe	East and west side Rio Grande.	Pueblo, very old	Sec. 3, T. 14 N., R. 5 E.	*a* 10	20	500	2,000	2,000	1,500	
1	28	Algodones	East side Rio Grande	Before 1800	Sec. 19, T. 14 N., R. 5 E.	10	10	250	1,000	1,000	750	
1	29	Santa Ana	West side Rio Grande	Probably about 1810	Sec. 25, T. 14 N., R. 4 E.	13	13	330	1,320	1,320	990	
1	30	do	East side Rio Grande	do	Sec. 1, T. 13 N., R. 4 E.	13	13	330	1,320	1,320	990	
1	31	Bernalillo	do	1700	Sec. 15, T. 13 N., R. 4 E.	25	25	620	2,480	2,480	1,860	
1	32	Sandia Pueblo	do	Pueblo, very old	Sec. 31, T. 13 N., R. 4 E.	18	18	450	1,350	1,800	1,120	
1	33	Upper Corales	West side Rio Grande	Before 1800	Sec. 23, T. 12 N., R. 3 E.	24	24	600	1,800	2,400	1,500	
1	34	Alameda	East side Rio Grande	do	Sec. 35, T. 12 N., R. 3 E.	25	25	630	1,890	2,520	1,580	
1	35	Los Ranchos	do	do	Sec. 3, T. 11 N., R. 3 E.	22	22	550	1,650	2,200	1,380	
1	36	Lower Corales	West side Rio Grande	do	Sec. 8, T. 11 N., R. 3 E.	8	8	200	600	800	500	
1	37	Los Griegos de Candaleria.	East side Rio Grande	do	Sec. 18, T. 11 N., R. 3 E.	21	21	530	1,590	2,120	1,360	
1	38	La Verela	do	do	Sec. 30, T. 11 N., R. 3 E.	20	20	500	1,500	2,000	1,250	
1	39	Duranes	do	1706	Sec. 36, T. 11 N., R. 2 E.	11	11	280	840	1,120	680	
1	40	Albuquerque	do	do	Sec. 1, T. 10 N., R. 2 E.	16	16	400	1,200	1,600	1,000	
22		Total					311	8,070	28,140	32,280	23,860	

a Each.

List of ditches in District No. 12, New Mexico, Española Valley.

Number of ditches.	Number on stream.	Name.	Stream.	When built.	Approximate location of head.	Capacity.	Total capacity.	Acres irrigated.	Acre-feet of water used.			Remarks.
									1894.	1895.	1896.	
						Sec. ft.	*Sec. ft.*					
2	1-2	Creniguilla	Springs on Rio Grande	About 1815	Sec. 29, T. 24 N., R. 11 E.	*a* 2	4	100	260	260	260	
1	3	Rincouada	East side Rio Grande	1815	Sec. 12, T. 23 N., R. 10 E.	6	6	180	720	720	720	
1	4	West Rincoñada	West side Rio Grande	About 1815	Sec. 11, T. 23 N., R. 10 E.	4	4	100	400	400	400	
1	5	La Bolsa	East side Rio Grande	do	Sec. 21, T. 23 N., R. 10 E.	3	3	50	200	200	200	
1	6	Canova	West side Rio Grande	do	Sec. 3, T. 22 N., R. 9 E.	7	7	250	1,000	1,000	1,000	
1	7	Los Chicos	East side Rio Grande	Old	Sec. 3, T. 22 N., R. 9 E.	5	5	250	1,000	1,000	1,000	
1	8	La Joya del Medio.	do	do	Sec. 3, T. 22 N., R. 9 E.	15	15	900	3,600	3,600	3,600	
1	9	Al Bosque	West side Rio Grande	do	Sec. 20, T. 22 N., R. 9 E.	7	7	280	1,120	1,120	1,120	
2	10, 11	Private	do	do	Sec. 30, T. 22 N., R. 9 E.	*a* 3	6	200	800	800	800	
1	12	La Estoca	do	do	Sec. 30, T. 22 N., R. 9 E.	7	7	280	1,120	1,120	1,120	
1	13	Private	East side Rio Grande	do	Sec. 21, T. 22 N., R. 9 E.	4	4	200	800	800	800	
1	14	Alcalde	do	Probably 1600.	Sec. 30, T. 22 N., R. 9 E.	30	30	1,500	6,000	6,000	6,000	
1	15	San Juan Pueblo	do	Pueblo, very old.	Sec. 35, T. 22 N., R. 8 E.	30	30	1,500	6,000	6,000	6,000	
1	16	Chamita	West side Rio Grande	Old	Sec. 35, T. 22 N., R. 8 E.	6	6	240	960	960	960	
1	24	San Jose	Chama River	do	Sec. 32, T. 22 N., R. 8 E.	65	65	2,000	6,000	6,000	4,000	
1	25	Chamita	do	Probably 1600.	Sec. 32, T. 22 N., R. 8 E.	60	60	1,800	3,900	3,900	2,600	
1	26	Salazar	do	Before 1800	Sec. 5, T. 21 N., R. 8 E.	35	35	960	2,880	2,880	1,920	
1	5	Upper, on south side.	Santa Cruz River	Old	Sec. 8, T. 20 N., R. 9 E.	4	4	200	600	600	400	Watered 400 acres prior to 1885 (capacity 8 second feet).
1	6	Middle, on south side.	do	do	Sec. 12, T. 20 N., R. 9 E.	6	6	300	600	600	450	
1	7	Kitchener, on south side.	do	do	Sec. 12, T. 20 N., R. 9 E.	6	6	300	600	600	450	
1	8	Private, on south side.	do	do	Sec. 2, T. 20 N., R. 8 E.	3	3	100	200	200	150	
1	9	Santa Cruz Plaza, north.	do	1609	Sec. 6, T. 20 N., R. 9 E.	36	36	1,100	2,200	2,200	1,650	
1	10	Private, north	do	Old	Sec. 1, T. 20 N., R. 8 E.	12	12	350	700	700	530	
1	11	do	do	do	Sec. 2, T. 20 N., R. 8 E.	5	5	100	200	200	150	
1	17	Hobart	East side Rio Grande		Sec. 22, T. 20 N., R. 8 E.	10	10	100	200	300	300	Built in 1898, but covers land formerly watered by Santa Cruz, No. 5.
1	18	Santa Clara	West side Rio Grande	Pueblo, very old.	Sec. 15, T. 20 N., R. 8 E.	6	6	200	800	800	800	
2	1, 2	do	Santa Clara Creek	do	Sec. 9, T. 20 N., R. 8 E.	*a* 6	12	300	600	600	300	

		ronso.										
32	.....	Total.....	.....	.....	.....	.....	406	14,060	44,180	44,280	38,040	

a Each.

List of ditches in District No. 13, New Mexico—Upper Albuquerque.

Number of ditches.	Number on stream.	Name.	Stream.	When built.	Approximate location of head.	Capacity.	Total capacity.	Acres irrigated.	Acre-feet of water used.			Remarks.
									1894.	1895.	1896.	
						Sec. ft.	*Sec. ft.*					
2	19, 20	Cochiti Pueblo ..	East and west side Rio Grande.	Pueblo, very old.....	Sec. 18, T. 16 N., R. 6 E..	*a* 12	24	450	1,800	1,800	1,800	
1	21	Pena Blanca.....	East side Rio Grande ...	Before 1800.....	Sec. 18, T. 16 N., R. 6 E..	22	22	850	3,400	3,400	3,400	
1	22	Santo Domingo..	.....do	Pueblo, very old.....	Sec. 36, T. 16 N., R. 6 E..	6	6	200	800	800	800	
2	23, 24	Santo Domingo, Lower.	.....do	.....do	Sec. 23, T. 15 N., R. 5 E..	*a* 4	8	200	800	800	800	
1	25	Sill.....	West side Rio Grande...	About 1820	Sec. 35, T. 16 N., R. 5 E..	5	5	200	800	800	600	
2	26, 27	San Felipe.....	East and west side Rio Grande.	Pueblo, very old.....	Sec. 3, T. 14 N., R. 5 E...	*a* 10	20	500	2,000	2,000	1,500	
1	28	Algodones	East side Rio Grande ...	Before 1800.....	Sec. 19, T. 14 N., R. 5 E..	10	10	250	1,000	1,000	750	
1	29	Santa Ana	West side Rio Grande...	Probably about 1810.	Sec. 25, T. 14 N., R. 4 E..	13	13	330	1,320	1,320	990	
1	30	.....do	East side Rio Grande ...	.....do	Sec. 1, T. 13 N., R. 4 E...	13	13	330	1,320	1,320	990	
1	31	Bernalillo.....	.....do	1700.....	Sec. 15, T. 13 N., R. 4 E..	25	25	620	2,480	2,480	1,860	
1	32	Sandia Pueblo...	.....do	Pueblo, very old.....	Sec. 31, T. 13 N., R. 4 E..	18	18	450	1,350	1,800	1,120	
1	33	Upper Corales...	West side Rio Grande...	Before 1800.....	Sec. 23 T. 12 N., R. 3 E..	24	24	600	1,800	2,400	1,500	
1	34	Alameda.....	East side Rio Grande ...	.....do	Sec. 35, T. 12 N., R. 3 E..	25	25	630	1,890	2,520	1,580	
1	35	Los Ranchos.....	.....do	.....do	Sec. 3, T. 11 N., R. 3 E...	22	22	550	1,650	2,200	1,380	
1	36	Lower Corales...	West side Rio Grande...	.....do	Sec. 8, T. 11 N., R. 3 E...	8	8	200	600	800	500	
1	37	Los Griegos de Candalería.	East side Rio Grande ...	.....do	Sec. 18, T. 11 N., R. 3 E..	21	21	530	1,590	2,120	1 360	
1	38	La Verela.....	.....do	.....do	Sec. 30, T. 11 N., R. 3 E..	20	20	500	1,500	2,000	1,250	
1	39	Duranes	.....do	1706.....	Sec. 36, T. 11 N., R. 2 E..	11	11	280	840	1,120	680	
1	40	Albuquerque....	.....do	.....do	Sec. 1, T. 10 N., R. 2 E...	16	16	400	1,200	1,600	1,000	
22	.....	Total.....	.....	.....	.....	.....	311	8,070	28,140	32,280	23,860	

a Each.

List of ditches in District No. 14, New Mexico—Lower Albuquerque.

Number of ditches.	Number on stream.	Name.	Stream.	When built.	Approximate location of head.	Capacity.	Total capacity.	Acres irrigated.	Acre-feet of water used.			Remarks.
									1894.	1895.	1896.	
						Sec. ft.	*Sec. ft.*					
1	41	Ranches de Atnico	West side Rio Grande	Before 1800	Sec. 11, T. 10 N., R. 2 E	9		140	420	560	280	
1	42	Upper Atnico	do	do	Sec. 12, T. 10 N., R. 2 E	36		540	1,620	2,160	1,080	
1	43	Middle Atnico	do	do	Sec. 13, T. 10 N., R. 2 E	20		300	900	1,200	600	
1	44	Lower Atnico	do	do	do	63		950	2,850	3,800	1,900	
1	45	Acequia de Pajorito	do	do	Sec. 12, T. 9 N., R. 2 E	65		980	2,940	3,920	1,960	
1	46	Los Padillos	do	do	Sec. 24, T. 9 N., R. 2 E	40		600	1,800	2,400	1,200	
1	47	Isleta Pueblo	do	Pueblo, very old.	Sec. 12, T. 8 N., R. 2 E	40		600	1,800	2,400	1,200	
1	48	Chical	East side Rio Grande	do	Sec. 13, T. 8 N., R. 2 E	21		320	960	1,280	640	
1	49	Pickory	do	do	Sec. 24, T. 8 N., R. 2 E	30		420	1,260	1,680	840	
1	50	Romero	do	Before 1850	do	40		600	1,800	2,400	1,200	
1	51	Peralta	do	do	Sec. 35, T. 8 N., R. 2 E	21		320	960	1,280	640	
1	52	Valencia	do	do	do	31		460	1,380	1,840	920	
1	53	Los Leutes	West side Rio Grande	do	do	40		600	1,800	2,400	1,200	
1	54	Los Lunas	do	do	Sec. 10, T. 7 N., R. 2 E	48		720	2,160	2,880	1,440	
1	55	Huning's Mill and Irrigation.	do	1872	Sec. 23, T. 7 N., R. 2 E	80		1,000	3,000	4,000	2,000	
1	56	San Fernandez	East side Rio Grande	Old	do	8		130	330	390	200	
1	57	Upper Touiè	do	do	Sec. 26, T. 7 N., R. 2 E	9		150	380	450	230	
1	58	Los Chavez	West side Rio Grande	do	Sec. 33, T. 7 N., R. 2 E	30		500	1,250	1,500	750	
1	59	Lower Touiè	East side Rio Grande	do	Sec. 3, T. 6 N., R. 2 E	36		600	1,500	1,800	900	
1	60	Belen	West side Rio Grande	do	Sec. 4, T. 6 N., R. 2 E	36		560	1,400	1,680	840	
1	61	La Sousal	do	do	Sec. 9, T. 6 N., R. 2 E	30		500	1,250	1,500	750	
1	62	La Constantia	East side Rio Grande	Very old	Sec. 21, T. 6 N., R. 2 E	36		600	1,500	1,800	900	
1	63	Acequia de los Innocentes.	West side Rio Grande	Old	Sec. 29, T. 6 N., R. 2 E	36		600	1,500	1,800	900	
1	64	Casa Colorada	East side Rio Grande	do	Sec. 16, T. 5 N., R. 2 E	36		600	1,500	1,800	900	
1	65	Jaroles	West side Rio Grande	do	Sec. 8, T. 5 N., R. 2 E	55		850	2,120	2,550	1,270	
1	66	Del Bosque	do	do	Sec. 29, T. 5 N., R. 2 E	36		600	1,500	1,800	600	
1	67	Sabinal	do	do	Sec. 8, T. 4 N., R. 2 E	30		600	1,500	1,800	600	
1	68	San Jose No. 1	East side Rio Grande	do	Sec. 8, T. 4 N., R. 2 E	65		800	2,000	2,400	800	
1	69	San Jose No. 2	do	1888	Sec. 20, T. 4 N., R. 2 E	30		400	1,000	1,200	400	All this land formerly watered by San Jose No. 1.
1	70	Las Nutrias	do	Old	Sec. 20, T. 4 N., R. 2 E	27		500	1,250	1,500	500	
1	71	Picocho	West side Rio Grande	1898	Sec. 7, T. 3 N., R. 2 E	21		300	750	900	300	

ditches.	stream.				head.	ity.	ity.	gated.	1894.	1895.	1896.	
						Sec.ft.						
1	74	San Geronimo	West Side Rio Grande.	Old	Sec. 32, T. 2 N., R. 1 E.	6		90	270	270	220	
1	5	San Acacio	do	do	Sec. 31, T. 1 N., R. 1 W.	14		650	1,950	1,950	1,580	
1	6	Polvideva	do	do	Sec. 31, T. 1 N., R. 1 W.	12		500	1,500	1,500	1,250	
1	7	Lemitar	do	do	Sec. 12, T. 1 S., R. 1 W.	42		1,000	3,000	3,000	2,500	
1	8	Socorro	do	do	Sec. 2, T. 2 S., R. 1 W.	40		600	1,800	1,800	1,200	
1	9	Publicito	East Side Rio Grande	do	Sec. 28, T. 2 S., R. 1 E.	5		150	380	450	300	
1	80	Lotiller	West Side Rio Grande.	do	Sec. 29, T. 2 S., R. 1 E.	22		600	1,500	1,800	1,200	
1	1	Cuba	do	do	Sec. 8, T. 3 S., R. 1 E.	8		200	500	600	400	
1	2	San Antonio	do	Before 1855	Sec. 8, T. 4 S., R. 1 E.	36		450	1,120	1,350	900	
1	3	Bosquecito	East Side Rio Grande	do	Sec. 8, T. 4 S., R. 1 E.	15		200	250	600	400	
1	4	San Pedro	do	do	Sec. 8, T. 4 S., R. 1 E.	28		400	1,000	1,200	800	
1	5	San Antonito	West Side Rio Grande.	1881	Sec. 32, T. 4 S., R. 1 E.	12		150	370	450	300	
1	6	Volverde	East Side Rio Grande	Before 1869	Sec. 10, T. 7 S., R. 1 W.	16		200	500	600	400	
1	7	San Marcial	West Side Rio Grande.	do	Sec. 17, T. 7 S., R. 1 W.	16		200	500	600	400	
1	8	La Mesa	East Side Rio Grande	do	Sec. 20, T. 7 S., R. 1 W.	14		200	500	600	400	
1	9	Contidero	do	1863	Sec. 19, T. 7 S., R. 1 W.	14		200	500	600	400	
16		Total				300		5,790	15,640	17,370	12,650	

List of ditches in District No. 16, New Mexico—Rincon.

Number of ditches.	Number on stream.	Name.	Stream.	When built.	Approximate location of head.	Capacity.	Total capacity.	Acres irrigated.	Acre-feet of water used.			Remarks.
									1894.	1895.	1896.	
						Sec. ft.	*Sec. ft.*					
1	90	Paraje	East side Rio Grande	1863	Sec. 28, T. 8 S., R. 2 W.	21	21	300	750	900	600	
1	1	Fort Craig	West side Rio Grande	1887	Sec. 21, T. 8 S., R. 2 W.	4	4	50	120	150	100	
1	2	Cautaricio	do	1869	Sec. 6, T. 9 S., R. 3 W.	11	11	200	500	600	400	
1	3	San Jose Plaza	do	Before 1864	Sec. 4, T. 10 S., R. 3 W.	14	14	300	750	900	600	
1	4	San Albino	East side Rio Grande	do	Sec. 10, T. 10 S., R. 3 W.	10	10	200	500	600	400	
1	5	Mitchell	West side Rio Grande	1884	Sec. 8, T. 11 S., R. 3 W.	11	11	250	620	750	200	But 100 acres watered in 1896.
2	96, 97	Gonzales	East and west side Rio Grande.	1884	Sec. 5, T. 12 S., R. 3 W.	a 3	6	90	220	270	180	
2	98, 99	Polomitas and Hot Springs.	West side Rio Grande	1870	——, T. 14 S., R. 4 W.	a 18	.....	900	.....	.....	.....	Washed out and abandoned in 1884.
1	100	Greenhorn	do	1895	Sec. 6, T. 16 S., R. 4 W.	10	10	60	.....	180	120	Failure.
1	1	Sierra	do	1895	Sec. 18, T. 16 S., R. 4 W.	10	10	200	.....	600	.....	Do.
1	2	Arroyo Bonito	do	1895	Sec. 35, T. 16 S., R. 5 W.	24	24	400	.....	600	800	Good ditch; 200 acres watered in 1895.
1	3	Loma Padre	East side Rio Grande	1893	Sec. 29, T. 17 S., R. 5 W.	100	100	3,600	2,500	7,500	7,200	200 acres in 1893; 1,000 in 1894; 2,500 in 1895.
1	4	Colorado Plaza	West side Rio Grande	1870	Sec. 27, T. 18 S., R. 4 W.	60	60	4,000	10,000	12,000	6,000	
1	5	East Colorado	East side Rio Grande	1870	Sec. 31, T. 18 S., R. 3 W.	10	10	100	250	300	150	Watered 250 acres prior to 1889.
1	6	Private	West side Rio Grande	1895	Sec. 17, T. 19 S., R. 2 W.	4	4	100	.....	150	150	Watered 50 acres in 1895.
17	.....	Total	.....	.....	.....	.....	295	9,850	16,210	25,500	16,900	

a Each.

Number of ditches.	Number on stream.	Name.	Stream.	When built.	Approximate location of head.	Capacity.	Total capacity.	Acres irrigated.	Acre-feet of water used. 1894.	1895.	1896.	Remarks.
						s. f.						
1	107	Doña Ana	East side Rio Grande	1844	Sec. 24, T. 21 S., R. 1 W.	70		4,600	11,500	11,500	11,500	About 7,000 acres watered prior to 1882; then gradually fell to 4,600 acres in 1888.
1	108	Las Cruces	do	1849	Sec. 4, T. 22 S., R. 1 E.	125		6,000	13,750	13,750	13,750	Has same head as 108; water divided equally since 1884.
1	109	La Mesilla	do	1850	Sec. 4, T. 22 S., R. 1 E.	125		5,000	13,750	13,750	13,750	4,000 acres watered in 1888.
1	110	Picacho	West side Rio Grande	1850	Sec. 4, T. 23 S., R. 1			(2,500)				Increase has been gradual. Abandoned 1880; land now vacant.
1	111	San Miguel	do	1857	Sec. 19, T. 24 S., R. 2	66		1,500	3,750	3,750	3,000	
1	112	Santa Tomaz	do	1857	Sec. 20, T. 24 S., R. 2	10		500	1,250	1,250	1,000	Washed out in 1884 and not used until 1890. Since 1890 takes water from San Miguel. Prior to 1884 served 1,200 acres.
1	113	Mesquite	East side Rio Grande	About 1875.	Sec. 36, T. 24 S., R. 2	10		500	1,250	1,250	1,000	Poor ditch.
1	114	La Mesa	West side Rio Grande	1857	Sec. 28, T. 24 S., R. 2	60		1,500	3,750	3,750	3,000	Until 1869 part of San Miguel.
1	115	Chambarino	do	1864	Sec. 13, T. 25 S., R. 2	75		3,000	7,250	7,500	4,500	Prior to 1884, 3,000 acres; 1885 to 1888, 2,000 acres. Then increase gradual.
1	116	Anthony	East side Rio Grande	1887	Sec. 7, T. 25 S., R. 3	30		500	1,250	1,250	750	1,000 acres served 1888-89-90.
1	117	Old La Union	West side Rio Grande	1852	Sec. 8, T. 26 S., R. 3	18		400	1,000	1,000	600	Prior to 1884, 4,000 acres watered; since 1884, 800 to 400 in 1890.
1	118	New La Union	East side Rio Grande	1892	Sec. 8, T. 26 S., R. 3	90		3,600	6,500	9,000	5,400	1892, 600 acres; 1893, 1,600 acres; 1894, 2,600 acres; 1895, 3,600 acres; still increasing.
12		Total				679		27,100	65,000	67,750	58,250	

NOTE.—See next sheet for acres served by these ditches since 1880.

Areas watered by ditches in District No. 17, New Mexico—Mesilla Valley.

No. of ditch.	Prior to 1880.	1880.	1881.	1882.	1883.	1884.	1885.	1886.	1887.	1888.	1889.	1890.	1891.	1892.	1893.	1894.	1895.	1896.
107	7,000	7,000	7,000	7,000	6,600	6,200	5,800	5,400	5,000	4,600	4,600	4,600	4,600	4,600	4,600	4,600	4,600	4,600
108	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000
109	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,150	4,300	4,450	4,650	4,800	5,000	5,000	5,000
110	2,500																	
111	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500
112	1,200	1,200	1,200	1,200	1,200	1,200						500	500	500	500	500	500	500
113	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500	500
114	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500
115	3,000	3,000	3,000	3,000	3,000	3,000	2,000	2,000	2,000	2,000	2,100	2,250	2,450	2,650	2,800	2,900	3,000	3,000
116									500	1,000	1,000	1,000	800	600	500	500	500	500
117	4,000	4,000	4,000	4,000	4,000	4,000	800	800	700	700	600	500	400	400	400	400	400	400
118														600	1,600	2,600	3,600	3,600
Total	31,200	28,700	28,700	28,700	28,300	27,900	22,100	21,700	21,700	21,800	21,950	22,650	22,700	23,500	24,700	26,000	27,100	27,100

Reservoirs already built in the Rio Grande drainage.

No.	When built.	Name.	Location.	Source of supply.	Capacity.	Remarks.
					Acre-feet.	
1	1894	Saguache	T. 44 N., R. 8 E., District 26, Colo.	Saguache Creek	1,200	Water supply not sufficient to fill this; probably a failure.
2	1883	Cove Lake	7 miles east of Antonito, District 22, Colo.	Conejos and San Antonio.	9,700	Filled through Taos Valley Canal No. 3; only small amount of land can be served by it; none watered up to fall of 1896.
3	1893	Santa Fe	3 miles east of Santa Fe, District 7, N. Mex.	Santa Fe Creek	400	Used for city supply and for irrigation.
4	1894	Bluewater	T. 12 N., R. 12 W., District 10, N. Mex.	Bluewater Creek	20,000	This can be increased to 70,000 acre-feet, but in 1896 there was not water enough in the drainage to fill it to its present capacity.
		Total			31,300	

No.	Name.	Location.	Source of supply.	Capacity.	Remarks.
				Acre-feet.	
1	Santa Maria lakes	T. 41 N., R. 2 W., District 20, Colo.	Rio Grande	20,000	
2	Mormon	5 miles northwest of Antonita, District 22, Colo.	Conejos River	20,000	
3	Western Homestead L. & I. Co.	T. 13 N., R. 2 W., District 10, N. Mex.	Rio Puerco	20,000	
4	Elephant Butte	T. 12 and 13 S., R. 2 W., District 16, N. Mex.	Rio Grande	235,000	
	Total			295,000	

Reservoir sites which may some time be improved.

No.	Name.	Location.	Source of supply.	Capacity.	Remarks.
				Acre-feet.	
1	La Jara Meadow	T. 35 N., R. 6 E., district 21, Colo.	La Jara Creek	20,000	Water would be used in district No. 21, Colorado.
2	Elk Creek Meadow	T. 33 N., R. 6 E., district 22, Colo.	Elk Creek	8,000	Water would be used in district No. 22, Colorado.
3	Pinos Creek Meadow	T. 33 N., R. 5 E., district 22, Colo.	Pinos Creek	5,000	Do.
4	Brazos Lakes	T. 29 N., R. 6 E., district 2, N. Mex.	South Fork Brazos Creek.	20,000	Water would be used in Tierra Amorilla, N. Mex. Reservoir could be built to hold 50,000 acre-feet, but it is not likely that the water supply will be over 20,000 acre-feet
5	Hot Springs Military Reservation.	T. 8 S., R. 7 W., district 11, N. Mex.	Rio Alamosa	20,000	A very good site, but water supply not certain; 400 square miles drainage; no snow.
6	Old Fort Craig	T. 8, 9, 10 S., R. 2 and 3 W., district 16, N. Mex.	Rio Grande	360,000	It is not likely that both this and the Elephant Buttes dam would ever be built.
	Total			433,000	

CORRESPONDENCE TOUCHING THE NEGOTIATION OF A TREATY BETWEEN THE UNITED STATES AND MEXICO FOR THE CONSTRUCTION OF AN INTERNATIONAL DAM IN THE RIO GRANDE.

[Translation.]

MEXICAN LEGATION,
Washington, December 19, 1896.

MR. SECRETARY: I have the honor to inform you that the Government of Mexico has authorized me to sign with you a convention in the sense of the report subscribed by the commissioners of Mexico and of the United States upon the International River Boundary Commission, concerning the construction of an international dam on the Rio Bravo del Norte (Rio Grande), and the equitable distribution of the waters thereof, for the purpose of providing for the execution of that work and assuring the reciprocal rights of the two nations.

Be pleased to accept, etc.

M. ROMERO.

Mr. RICHARD OLNEY.

[Translation.]

MEXICAN LEGATION,
Washington, December 29, 1896.

Mr. SECRETARY: In the note which I addressed to you on the 19th instant I informed you that the Government of Mexico had authorized me to sign with you a convention in the sense of the report made by the commissioners of Mexico and the United States in the International River Boundary Commission concerning the construction of an international dam on the Rio Bravo (Rio Grande) and the equitable distribution of the waters thereof to the end of providing for the execution of that work and securing the reciprocal rights of the two nations.

I have now the honor to acquaint you that I have just received a copy of the report in question, and that, consequently, if that report shall have had the approval of the Government of the United States, and if, in the view of putting it in practical shape, you desire that I prepare a draft of a convention, I shall be glad to do so as soon as I receive an intimation from you.

Be pleased to accept, etc., M. ROMERO.

Hon. RICHARD OLNEY.

o. 199.]

DEPARTMENT OF STATE,
Washington, January 4, 1897.

SIR: I have the honor to acknowledge the receipt of your note of e 29th ultimo, in which you state that you are ready to prepare a ject of a convention providing for an international dam on the Rio ande for the equitable distribution of its waters upon receiving tice from this Department.

n reply I have the honor to say that a draft convention as proposed uld be exceedingly valuable and would probably greatly facilitate sequent negotiations. I must add, however, that in preparing to er into negotiations the Department has found the subject embarsed by greatly perplexing complications arising out of reservoir ns, etc., either already built or authorized through the concurrent ion of the Federal and State authorities. Just what legal validity o be imputed to such grants of authority, or in what way structures npleted or begun are to be dealt with, are questions under careful estigation and which must be disposed of before the United States l be in a condition to negotiate.

Accept, etc., RICHARD OLNEY.

eñor Don M. ROMERO.

MEXICAN LEGATION,
Washington, January 5, 1897.

IR. SECRETARY: I have the honor to acknowledge the receipt of ir note of yesterday, No. 199, in which you are pleased to state to in reply to my note of December 29, 1896, that in order that the ited States be in a situation to negotiate in regard to the construcı of a dam for an equitable distribution of the waters of the River ıvo del Norte they need first to examine the validity of the consions made by the Federal Government and the governments of States for the construction of dams in the said river, and you icate at the same time that a draft of a convention for that pure would be useful and would probably greatly facilitate subseent negotiations.

n virtue of that indication I have the honor to inclose to you copy a draft of convention that I have made in accordance with the tructions of my Government, in which I have endeavored to recast recommendations contained in the report of the International ıter Boundary Commission of November 25, 1896. I have already ımitted this draft to the Government of Mexico, but for the pure that it may serve as the basis of the negotiations and probably ıdvance it, I have the honor to inclose to you a copy of the same.

ıt first view the concessions made by the United States in conformwith the report of the mixed commission would seem to be great, ; when this matter is examined under all its aspects the importance those concessions is much lessened, taking into account the follow- considerations:

'irst. Since the lack of water in the River Bravo del Norte at cern months in the year the inhabitants of the Mexican shore, in the rt comprising the district of Paso del Norte, have decreased almost per cent, as a population of 18,630 has been reduced to 8,814.

Second. That the loss of public wealth in the last ten years has en $22,840,000, and that of private individuals $12,845,000, the two ns amounting to a total of $35,685,000.

Third. That the Government of the United States, and espe the State of Colorado, have obtained great advantages throug use of the waters in Colorado, since the Federal Government has able to sell millions of acres of lands which are irrigated by the w of the River Bravo del Norte and its tributaries, and the popu of the State of Colorado has increased fivefold in a period of f years.

Fourth. That the work indicated will profit in equal degre citizens of Mexico and of the United States.

The weight of these considerations is much enhanced if it is into account that if the reasons which I have pointed out di exist and the work were to be constructed by both Government cost of only one-half would be payable by Mexico, so that M receives for the damages suffered by her citizens, not the total of the work, but that of one-half.

Accept, etc., M. Rom

[Translation.]

The Government of the United States of Mexico and the Government United States of America, wishing to put an end in a friendly and equitabl ner to the controversy arising from the use in the State of Colorado and t ritory of New Mexico of the waters of the Rio Bravo del Norte and its tribu constituting the dividing line between the two countries from Paso del N its mouth in the Gulf of Mexico, owing to which use the people living banks below Paso del Norte, who had a prior right to these waters from used them in the irrigation of their lands for nearly four hundred year been deprived of them, as it appears that that part of the said river betw Paso and the Conchos River is left without water during several months year, and as the freshets occasion changes by avulsion and erosion, giving frequent disputes and difficulties, have agreed, after considering the report special mixed commission appointed to investigate this subject and to su fair settlement securing the mutual rights of the two countries interes conclude a convention for that purpose, and have appointed their res plenipotentiaries:

The President of the United States of Mexico; Matias Romero, envoy ext nary and minister plenipotentiary of the United States of Mexico at Wash and

The President of the United States of America; Richard Olney, Secre State of the United States of America;

Who, after showing each other their respective full powers, and findin in good and due form, have agreed upon the following articles:

ARTICLE I.

To attain the ends mentioned in the preamble to this convention, an i tional dam shall be constructed in the Rio Bravo del Norte within as sho as possible, not exceeding ——— years, about three miles above El Paso, miles long and about three and a half miles wide, in the manner and up conditions proposed by the mixed commission.

ARTICLE II.

In compensation for the damage suffered by Mexican citizens in consequ the use of the waters of the Rio Bravo del Norte in the State of Colorado Territory of New Mexico, the Government of the United States of Ameri bear all the expenses necessary for the construction of the dam in the mann posed in the opinion of the special commission, and will cede to the Gover of Mexico the territory referred to in Article III of this convention.

ARTICLE III.

In order that the dam the construction of which is provided for by this c tion may have a real international character—that is to say, that it may structed upon the dividing line between the two countries—the United St America agrees to cede to Mexico such territory as may be necessary,

according to the report of the special mixed commission, will not exceed 100 acres, in order that the southern side of the dam may be in Mexican territory.

The Government of the United States of Mexico will recognize and respect, in ceded territory, the rights granted by the Government of the United States of America to the Southern Pacific Railroad Company on that part of its track passing through the territory ceded.

ARTICLE IV.

The Government of the United States of Mexico will appoint such officer or agents as it may deem expedient to superintend the construction of the dam, in order that it may be in conformity with the provisions of this convention and the specifications of the work.

ARTICLE V.

Half of the water contained in the dam shall belong to each of the contracting parties, and each shall appoint a commissioner and such other employees as it may think necessary to arrange the equal apportionment of the water, and to see that what is left, in case either or both the Governments do not consume the half belonging to them, is disposed of in such a way that the dam will be emptied and filled with regularity, and that, so far as possible, a uniform current will be maintained in the river, so as to prevent changes in its bed by erosion or avulsion. In doubtful cases, the decision of the two commissioners shall be regarded as binding upon both Governments unless one of them shall disapprove it within one month, in which case the two Governments shall take cognizance of the matter themselves, and decide it amicably in such manner as shall appear to them just and expedient.

The same course shall be adopted when the commissioners disagree as to the point causing the doubt or dispute, in which case each commissioner shall draw up his opinion in writing and present it to his own Government.

ARTICLE VI.

To prevent new appropriations of water which might still more diminish the volume of the Rio Bravo del Norte hereafter, and thereby prevent the passage of the water necessary to fill the dam to which this convention refers, the Government of the United States of America binds itself to issue the necessary regulations, and to apply, if necessary, to the Congress of the United States of America for legislation to prevent the construction of new works or canals on the Rio Bravo del Norte and its tributaries, on that part passing through the territory of the United States of America, or, if they are constructed, to prevent the volume of water being diminished to such an extent that it will not supply the dam, and to institute prompt and efficacious legal proceedings to prevent the violation of the provisions of this convention.

ARTICLE VII.

The two Governments shall appoint a mixed commission of engineers to lay off the dividing line in accordance with the provisions of Article III of this convention, and the line run by that commission shall be regarded hereafter as the dividing line between the two countries.

ARTICLE VIII.

In compensation for the expenses which the Government of the United States of America has to undergo in the construction of the dam, and in consideration of the cession of territory referred to in Article III of this convention, the Government of the United States of Mexico regards as satisfied all claims of Mexican citizens against the Government of the United States of America arising from the want of water in the Rio Bravo del Norte caused by the taking of water in the State of Colorado and the Territory of New Mexico, and expects no indemnity for such damage.

ARTICLE IX.

The present convention shall be ratified by the two parties in accordance with their respective constitutional procedure, and the ratifications shall be exchanged at Washington as soon as possible.

In witness whereof the undersigned plenipotentiaries have signed and sealed the same.

Done in duplicate in *the city of* Washington, in the Spanish and English languages, *this* —— *day of* ——, *eighteen* hundred and ninety-seven.

Department of State, I would remark that the modifications
Articles II, III, VI, and VIII, and that, as already stated, they
of additions and alterations of mere form, the object of whi
make it clearer and more conformable to the recommendation
International Water Boundary Commission.

Be pleased to accept, etc.,

M. Ro

Hon. RICHARD OLNEY.

The Government of the United States of Mexico and the Governme
United States of America, desiring to settle in a friendly and equitabl
the question which has grown out of the use, in the State of Colorado an
ritory of New Mexico, of the water of the Rio Bravo del Norte and its
ries—the said Rio Bravo del Norte forming the boundary line betwee
countries from El Paso del Norte to the point where it empties into th
Mexico, by the use of which water the inhabitants of the river banks
below El Paso del Norte have been deprived of that water for seve
although they had a prior claim, owing to their having used it in irriga
lands for nearly four hundred years, the result being that the part of
which is comprised between El Paso and the Conchos River is without
several months in the year, and the freshets cause changes through avul
erosion which give rise to frequent questions and difficulties—have agr
hearing the report of the special mixed commission appointed to exa
matter and propose such an equitable settlement as may secure the
rights of the two countries interested, to conclude a convention for that
and have appointed as their respective plenipotentiaries:

The President of the United States of Mexico, Matias Romero, envo
dinary and minister plenipotentiary of the United States of Mexico at
ton; and

The President of the United States of America, Richard Olney, Se
State of the United States of America;

Who, having shown each other their respective full powers and found
be in good and due form, have agreed upon the following articles:

ARTICLE I

ARTICLE III.

order that the dam whose construction is provided for by this convention be of a truly international character—that is to say, that it may be built on oundary line between the two countries—the United States of America agree le to Mexico such portion of territory as may be necessary, which, according e report of the special mixed commission, will not exceed 100 acres, so that outhwest side of the dam may be in Mexican territory.

e Government of the United States of Mexico shall recognize and respect in eded territory the rights granted by the Government of the United States of rica to the Southern Pacific Railway Company on that part of their line h passes through the ceded territory.

ARTICLE IV.

e Government of the United States of Mexico shall appoint such officer or as as it may think proper to supervise the construction of the dam, in order it may be built according to the stipulations of this convention and the ications of the work.

ARTICLE V.

ch of the contracting parties shall own one-half of the water contained in the and each shall appoint a commissioner and such other officers as it may think sary to arrange for the equal division of the water, and to cause the remainder, se either of the Governments shall not use the half belonging to it, to be reg- d in such a manner that the dam may be regularly emptied and filled, a uni- current being maintained in the river, as far as possible, with a view to ing changes in its bed through erosion or avulsion. In cases of doubt the ion of both commissions shall be considered binding upon both Governments, s either of them shall disapprove it within a month, in which case both Gov- ents shall examine the case and shall decide it amicably in such manner as appear to them justifiable and proper.

e same thing shall be done when the commissioner shall prepare a written t and shall lay it before his Government.

ARTICLE VI.

th a view to prevent such taking of water hereafter as may still further nish the volume of water in the Rio Bravo del Norte and prevent the passage e water necessary to fill the dam, to which this convention has reference, the rnment of the United States of America pledges itself to issue suitable orders, ng recourse, if necessary, to the Congress of the United States of America in to secure the enactment of the necessary laws, to the end that no new works nals be constructed in the Rio Bravo del Norte and its tributaries in the which passes through the territory of the United States of America, and that nstructed they shall not diminish the volume of water necessary to supply am, and for the establishment of a speedy and effective legal method of pre- ng the violation of the stipulations of this convention.

ARTICLE VII.

e two Governments shall appoint a mixed commission of engineers to deter- the boundary line in accordance with the stipulations of this convention. he line drawn by that commission shall thereafter be considered as the dary line between the two countries.

ARTICLE VIII.

way of compensation for the expense which the Government of the United s is obliged to incur in constructing the dam, for the territory which it cedes, or the other expenditures referred to in Article III of this convention, the rnment of the United States of Mexico considers as settled all claims of Mex- citizens against the Government of the United States of America based upon t of water in the Rio Bravo del Norte owing to its appropriation in the State lorado and the Territory of New Mexico, and renounces any other indemnity ch losses.

Washington, March 5, 1

SIR: I have the honor to acknowledge the receipt of your two of January 5 and 30 last, by the latter of which you inform m you have been authorized to sign the convention—draft of whic inclose—for the construction of an international dam on the Rio Gr

Accept, etc.,

RICHARD OLN

Señor Don MATIAS ROMERO.

WAR DEPARTMENT,
Washington, March 12, 1

The PRESIDENT:

I have the honor to transmit herewith copies of papers on file i Department relative to the protest against construction by th Grande Dam and Irrigation Company of dams across the Rio G River at Elephant Butte and vicinity, in response to Senate reso of February 26, 1898, as follows:

Resolved, That the President be, and he is hereby, requested, if not inco ble with the public interests, to transmit to the Senate the proceedings of th national commission authorized in the concurrent resolution of Congress o twenty-ninth, eighteen hundred and ninety, and a subsequent internation vention between the United States and Mexico of May sixth, eighteen h and ninety-six, and also the correspondence relating thereto with Mexico Department of the Interior, Department of War, and Department of Jus well as the Department of State, relating to the equitable distribution of the of the Rio Grande River, including the draft of an incomplete treaty betwe Governments, negotiated between the late Secretary of State, Mr. Olney, part of the United States, and Mr. Romero, on the part of Mexico, and all t respondence between said officials relating thereto.

Very respectfully,

R. A. ALGER,

The State Department wishes to be informed as to whether the river in the parts which will be affected by the dam is a navigable water of the United States within the meaning of the river and harbor laws of 1890 and 1892, so as to make the sanction of the Secretary of War prerequisite to the lawful erection of the dam.

On account of Captain Derby's personal acquaintance with the question, the papers have been referred to him to furnish such information on the subject as may be in his possession, but they will be forwarded by him to you, and it is desired that as thorough investigation be made by you of this matter as is practicable.

It is suggested that Mr. Gerald Bagnall, who made report on a survey of the river in 1889, may have other information regarding the commerce, etc., of the Rio Grande which may be of value in your investigation.

Very respectfully, your obedient servant,

A. MACKENZIE,
Acting Chief of Engineers.

Maj. A. M. MILLER,
Corps of Engineers, Galveston, Tex.

UNITED STATES ENGINEER OFFICE,
New Orleans, La., February 1, 1897.

GENERAL: I have the honor to report as follows in compliance with your indorsement of January 25, 1897, directing me to furnish such information as may be in my possession on the subject of the navigability of the Rio Grande River as affecting the validity of the claim to the right to dam the river at Elephant Butte, made by the Rio Grande Dam and Irrigation Company.

Such knowledge as I have of this question has come to me through my having served since last May as engineer member of the International (water) Boundary Commission in the consideration of questions pertaining to the use of the waters of the Rio Grande and the project of an international dam at El Paso.

The flow of water in the Rio Grande at and near El Paso is exceedingly variable; there are months in the year when there is no flow at all, and at other times the monthly flow is as great as 12,000 cubic feet per second. The periods of high water recur annually with regularity, and at such times the river is unquestionably navigable at and above El Paso, and could certainly be used in commerce for floating logs and flatboats. I have no knowledge of the fact that this portion of the river has ever been put to such use, the country being but sparsely settled and timber being exceedingly scarce. But the issue is not whether the river has been actually navigated, but whether it is navigable within the meaning of the law, so that it can be classified as navigable waters of the United States entitled to the protection of the Secretary of War under the act of September 19, 1890.

As many rivers of the country have been so classified which in point of depth, volume, and regularity of flow offer fewer advantages to navigation than does the Rio Grande at El Paso, it seems clear to me that this stream should also be so classified.

Further, it would appear from the inclosed papers that it has heretofore been decided that the Rio Grande is navigable at and below a point 150 miles below El Paso, and since the river receives no impor-

tant tributary within this 150 miles of its course, it is manifest that a dam at Elephant Butte which would entirely stop the flow at El Paso would necessarily injuriously "modify the capacity of the channel" of the river in that part of its course where it has heretofore been held to be navigable.

From either of these standpoints it would appear that the plans of the Rio Grande Dam and Irrigation Company require the approval and authorization of the Secretary of War.

Very respectfully, your obedient servant,

GEO. MCC. DERBY,
Captain of Engineers.

Brig. Gen. W. P. CRAIGHILL,
Chief of Engineers, U. S. A.

[First indorsement.]

UNITED STATES ENGINEER OFFICE,
Galveston, Tex., February 5, 1897.

Respectfully forwarded to the Office Chief of Engineers, United States Army, with report of this date.

A. M. MILLER,
Major, Corps of Engineers.

WAR DEPARTMENT,
Washington, February 19, 1897.

SIR: Under what purports to be authority for it to do so, granted in 1895 by the Secretary of the Interior under sections 18 to 21, pages 1101 and 1102, volume 26, Statutes at Large, the Rio Grande Dam and Irrigation Company claims the right to construct a dam across the Rio Grande River at Elephant Butte, in New Mexico, 125 miles above El Paso, and are about to do it.

The Secretary of State has requested the Secretary of War to "adopt such measures as are most effective to open the river and to keep it open to such navigation as it is naturally capable of affording for commercial traffic between the States or between any portion of the United States and Mexico."

Permission to construct the dam has not been given by the Secretary of War, nor has he approved or authorized the same. The mouth of the Concho River, which empties into the Rio Grande, is 325 miles below the site of the proposed dam; and this river is the first material addition to the Rio Grande's volume of water below that point. From the mouth of the Concho up to El Paso, a distance of 200 miles, the Rio Grande has been demonstrated to be a navigable water, and used as such in interstate commerce, and it has been recognized by Congress to be a navigable water at El Paso. Above El Paso it does not appear to be used now for the purposes of navigation. But from El Paso up to and including the site of the proposed dam, and a good many miles beyond that point, it has been used to float logs for commercial and business purposes, and in this part of the river it carries a slightly greater quantity of water than it does at El Paso and for 200 miles below El Paso, the volume of water being decreased on this part of the river by evaporation and agricultural uses. And also in this part of the river above El Paso, and including the site of the proposed dam, the conformation of the bed and banks of the river are such as

to make navigation, by reason of the deeper and more confined channel, more feasible than at El Paso.

The proposed dam is to be such a one as will check the flow of water in the river at Elephant Butte entirely for a great portion, if not all, of the year and impound it, and also distribute it from that point for purposes of irrigation, so that the Rio Grande will be practically destroyed as a stream for many miles below Elephant Butte, and its volume of water so diminished as to materially affect its navigability throughout its entire course to the Gulf of Mexico.

Your opinion is therefore requested as to whether, under the existing state of the law, there is any way for the United States authorities to prevent the construction of the said dam, and if so, what the remedy is.

Very respectfully,

DANIEL S. LAMONT,
Secretary of War.

The ATTORNEY-GENERAL.

WAR DEPARTMENT,
Washington, April 8, 1897.

SIR: Referring to State Department letter of January 13, 1897, transmitting letter from the Mexican minister inclosing a petition from Mexican citizens in and around Paso del Norte, Mexico, protesting against the construction by the Rio Grande Dam and Irrigation Company of dams across the Rio Grande River at Elephant Butte and vicinity, and requesting the United States to issue orders suspending all work in the Rio Bravo by said company, which was referred to your Department with other correspondence on the subject under date of February 19, 1897, with request for opinion whether there was any way to prevent construction of the dam in question, and if so, how, I now have the honor to transmit herewith another letter from the Department of State, with accompanying copy of letter from the Mexican minister on the same subject, and to renew the request for an opinion on the question presented and invite attention to the pressing need of early action by your Department.

Very respectfully,

R. A. ALGER, *Secretary of War.*

The ATTORNEY-GENERAL.

DEPARTMENT OF JUSTICE,
Washington, D. C., April 24, 1897.

SIR: I have the honor to acknowledge the receipt of your letter of April 8, referring to a previous correspondence between the Mexican minister at this capital and the Department of State with reference to the attempted construction by the Rio Grande Dam and Irrigation Company of dams across the Rio Grande River, and to a request made by you February 19 for an opinion from this Department on the question submitted, and you "renew the request for an opinion on the question presented and invite attention to the pressing need of early action by your Department."

I regret that compliance with your request for an opinion has been delayed by the resignation of officers of this Department since the request was received.

Your letter of February 19 was as follows:

Under what purports to be authority for it to do so, granted in 1895 by the Secretary of the Interior under sections 18 to 21, pages 1101 and 1102, volume 26, Statutes at Large, the Rio Grande Dam and Irrigation Company claims the right to construct a dam across the Rio Grande River at Elephant Butte, in New Mexico, 125 miles above El Paso, and are about to do it.

The Secretary of State has requested the Secretary of War to "adopt such measures as are most effective to open the river and to keep it open to such navigation as it is naturally capable of affording for commercial traffic between the States or between any portion of the United States and Mexico."

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The proposed dam is to be such a one as will check the flow of water in the river at Elephant Butte entirely for a great portion, if not all, of the year and impound it, and also distribute it from that point for purposes of irrigation, so that the Rio Grande will be practically destroyed as a stream for many miles below Elephant Butte, and its volume of water so diminished as to materially affect its navigability throughout its entire course to the Gulf of Mexico.

Your opinion is therefore requested as to whether, under the existing state of the law, there is any way for the United States authorities to prevent the construction of the said dam, and, if so, what the remedy is.

As I understand, the only authority which the Secretary of the Interior possessed is claimed to have been conferred by sections 18 to 21 of the act of March 3, 1891, entitled "An act to repeal timber-culture laws, and for other purposes." The sections referred to—and section 17—provide only for the location and selection of reservoir sites on the public lands of the United States and rights of way for irrigating ditches and canals. There is nothing in the act or its purposes which was intended to affect the control or supervision of the navigable rivers of the country. That, by other and indeed later legislation, is put in the Secretary of War.

Section 10 of the river and harbor act approved September 19, 1890 (26 Stat., 454), is as follows:

That the creation of any obstruction, not affirmatively authorized by law, to the navigable capacity of any waters in respect of which the United States has jurisdiction, is hereby prohibited. The continuance of any such obstruction, except bridges, piers, docks, and wharves, and similar structures, erected for business purposes, whether heretofore or hereafter created, shall constitute an offense, and each week's continuance of any such obstruction shall be deemed a separate offense. Every person and every corporation which shall be guilty of creating or continuing any such unlawful obstruction in this act mentioned, or who shall violate the provisions of the last four preceding sections of this act, shall be deemed guilty of a misdemeanor, and on conviction thereof shall be punished by a fine not exceeding five thousand dollars, or by imprisonment (in the case of a natural person) not exceeding one year, or by both such punishments, in the discretion of the court. The creating or continuing of any unlawful obstruction in this act mentioned may be prevented and such obstruction may be caused to be removed by the injunction of any circuit court exercising jurisdiction in any district in which

ch obstruction may be threatened or may exist; and proper proceedings in equity this end may be instituted under the direction of the Attorney-General of the ıited States.

Section 7 of that, approved July 13, 1892, is as follows:

That section seven of the river and harbor act of September nineteenth, eighteen ndred and ninety, be amended and reenacted so as to read as follows:
SEC. 7. That it shall not be lawful to build any wharf, pier, dolphin, boom, m, weir, breakwater, bulkhead, jetty, or structure of any kind outside estab-hed lines or in any navigable waters of the United States where no harbor lines) or may be established, without the permission of the Secretary of War, in any rt, roadstead, haven, harbor, navigable river, or other waters of the United ıtes in such manner as shall obstruct or impair navigation, commerce, or chorage of said waters; and it shall not be lawful hereafter to commence the ıstruction of any bridge, bridge draw, bridge piers and abutments, causeway, other works over or in any port, road, roadstead, haven, harbor, navigable er, or navigable waters of the United States, under any act of the legislative ıembly of any State, until the location and plan of such bridge or other works ve been submitted to and approved by the Secretary of War, or to excavate or or in any manner to alter or modify the course, location, condition, or capacity any port, roadstead, haven, harbor, harbor of refuge, or inclosure within the ıits of any breakwater, or of the channel of any navigable water of the United ıtes, unless approved and authorized by the Secretary of War.
Provided, That this section shall not apply to any bridge, bridge draw, bridge ırs and abutments, the construction of which has been heretofore duly author-d by law, or be so construed as to authorize the construction of any bridge, awbridge, bridge piers, and abutments, or other works under an act of the ıislature of any State, over or in any stream, port, roadstead, haven, or harbor, other navigable water not wholly within the limits of such State.

These provisions are very definite, and the answer to your inquiry obvious if the stream be a navigable one. This you assert and I ısume it.

You say:

The proposed dam is to be such a one as will check the flow of water in the river Elephant Butte entirely for a great portion, if not all, of the year and impound ; and also distribute it from that point for purposes of irrigation, so that the io Grande will be practically destroyed as a stream for many miles below Ele-ıant Butte, and its volume of water so diminished as to materially affect its nav-ability throughout its entire course to the Gulf of Mexico.

The purposes of the company do not seem to be ambiguous. In s prospectus (and, by the way, it is a foreign company, chartered by ngland) it proclaims its purposes to be—

1. To create the largest artificial lake in the world.
2. To obtain control of the entire flow of the Rio Grande in Southern New exico, the only practical means of irrigating what is now considered the finest uit and wine country in the United States, and by controlling the water, to ıntrol to a great extent the irrigable lands.
3. To compel the owners of irrigable lands in the valley of the Rio Grande to ınvey one-half of their lands to the company in return for water rights to the her half, and to pay in addition a perpetual water rent of $1.50 per acre for ery acre irrigated, or else to purchase water rights at the ruling rate from the mpany.
4. To supply water to cities and towns for domestic and municipal purposes, ıd for milling and mechanical power, for which (they say) there is a large and nstantly increasing demand.

The answer to your inquiry therefore is:

(1) That the Secretary of the Interior had no power, under the pro-sions of the act of March 3, 1891 (supra), to grant the rights claimed.

(2) That the remedy of the United States is by injunction under ıction 10 of the act of September 19, 1890 (supra), and if the dam ıs been constructed, also by criminal prosecution.

Washington, April 29,

SIR: Referring to your letters of January 13 and April 1, 1897 ing copies of communications dated August 4, 1896, and Ma 1897, from the Mexican minister at this capital, relating to th of certain corporations to erect irrigation dams across the Rio River, thereby impeding the navigation of that stream, I h honor to advise you that on February 19 last the question w mitted to the Attorney-General, with request to be advised a powers of the War Department to prevent the construction of posed dams, and I now inclose for your information a cop opinion, dated 24th instant, attention being invited to the paragraphs thereof, in which the inquiry is answered.

The papers have been returned to the Chief of Engineers fo as to whether or not the obstruction complained of has be about to be erected, so that this Department may advise the A General as desired in the concluding paragraph of his opinion

Very respectfully,

R. A. ALGER, *Secretary of*

The SECRETARY OF STATE.

WAR DEPARTMEN

Washington, April 29,

SIR: Referring to your communication addressed to the S of State on December 19, 1896, in the matter of the constru the Rio Grande Dam and Irrigation Company of dams across Grande River, I have the honor to advise you that the sub brought to the attention of the War Department by letters f Secretary of State, dated January 13 and April 1, 1897, in w inclosed protests from the Mexican minister at this capital aga

The papers have been returned to the Chief of Engineers for report as to whether or not the obstruction complained of has been or is about to be erected, so that this Department may advise the Attorney-General as desired in the concluding paragraph of his opinion. A copy of this opinion has to-day been transmitted to the honorable the Secretary of State.

Very respectfully, R. A. ALGER, *Secretary of War.*

The SECRETARY OF THE INTERIOR.

DEPARTMENT OF THE INTERIOR,
Washington, May 1, 1897.

SIR: I have the honor to acknowledge the receipt of your letter of the 29th ultimo, inclosing for the information of this Department a copy of the opinion rendered by the Attorney-General on the 24th ultimo, at your request, regarding the right of the Rio Grande Dam and Irrigation Company to erect dams across the Rio Grande.

Very respectfully,

C. N. BLISS, *Secretary.*

The SECRETARY OF WAR.

[Telegram.]

WASHINGTON, D. C., *May 1, 1897.*

Attorney-General will order proper proceedings instituted if construction of Elephant Butte Dam has been or is about to be commenced. I am instructed by Secretary of War to obtain facts as to status of construction. Will you please telegraph me such facts?

WILSON, *Chief of Engineers.*

Col. ANSON MILLS, *El Paso, Tex.*

[Telegram.]

EL PASO, TEX., *May 2, 1897.*

Your dispatch received. The Rio Grande Dam and Irrigation Company have not as yet commenced constructing their dam proper at Elephant Butte, the only point for which they have permit from the Interior Department, although they declare their purpose to do so in July next. They have, however, been at work with a large force for the past five months on what they term auxiliary works below, at Fort Seldon, to their dam proper, constructing a diverting weir or dam and canal on which they have expended perhaps $35,000, about equally divided between the dam and canal. As this expenditure is useless to them without their dam proper, as it stores no water, its construction first gives color to the presumption that their object is to acquire vested rights as against the Government should they be suppressed or restricted. They have 2,000 barrels of cement direct from England. Work has within the last few days been suspended, as they allege, on account of high water, but probably for want of funds. I write you to-day inclosing certified copy of their charter,

with other information more in detail which may be useful t
officer instituting the proceedings.

ANSON MILLS, *Commissio*

General WILSON,
Chief of Engineers, Washington, D. C.

WAR DEPARTMENT,
Washington, May 4, 1

SIR: In the closing paragraph of your opinion, dated April 24
in regard to the threatened construction of a dam across th
Grande River at Elephant Butte, N. Mex., by the Rio Grande
and Irrigation Company, it is stated as follows:

Upon being advised that the construction has been or is about to be en
shall at once order proper proceedings to be instituted by the United Sta
trict attorney under section 10 of the act approved September 19, 1
Stat., 454).

I have the honor to transmit herewith telegrams dated May
3, 1897, from Col. Anson Mills, Third Cavalry, commissioner
United States, Water Boundary Commission of the United Sta
Mexico, and to request that in view of the facts stated there
United States district attorney be instructed as indicated abov

Very respectfully,

R. A. ALGER, *Secretary of*

The ATTORNEY-GENERAL.

DEPARTMENT OF STATE,
Washington, May 5,

SIR: I have to acknowledge the receipt of your letter of t
ultimo, with inclosure from the Attorney-General, on the sub
the erection of irrigation dams across the Rio Grande.

Respectfully, yours,

JOHN SHER

The SECRETARY OF WAR.

DEPARTMENT OF JUSTICE
Washington, D. C., May 7,

SIR: I have the honor to acknowledge your communication
4th requesting that the United States attorney of New Mex
instructed to institute such proceedings as may be proper to p
the construction of a dam across the Rio Grande River at El
Butte, New Mexico, by the Rio Grande Dam and Irrigation Co
and to say that the instructions have been given as requested.

Very respectfully,

HOLMES CONRAD,
Acting Attorney-Gen

The SECRETARY OF WAR.

DEPARTMENT OF JUSTICE,
Washington, D. C., May 13, 1897.

IR: I send you herewith letter of Col. Anson Mills, Third Cavalry, ited States Army, of the International Boundary Commission, dated Paso, Tex., May 2, 1897, addressed to Gen. John M. Wilson, Chief Engineers, together with its inclosures, all in relation to the Ele- nt Butte Dam proposed to be constructed by the Rio Grande Dam l Irrigation Company; which letter by your second indorsement, ed May 7, was transmitted to me, but not received at this Depart- nt until the 11th instant, the United States attorney for New Mex- having been instructed on the 7th instant, as you were that day ised, in accordance with your previous request.

Respectfully,

JOSEPH MCKENNA,
Attorney-General.

he SECRETARY OF WAR.

OFFICE OF THE CHIEF OF ENGINEERS,
UNITED STATES ARMY,
Washington, D. C., May 14, 1897.

OLONEL: As it is believed to be a matter of considerable interest ou, I beg to advise you that the Attorney-General has informed Department that he has instructed the United States attorney of w Mexico to institute such proceedings as may be proper to pre- t the construction of a dam across the Rio Grande at Elephant te, N. Mex., by the Rio Grande Dam and Irrigation Company.

Very respectfully, your obedient servant,

JOHN M. WILSON,
Brig. Gen., Chief of Engineers, U. S. Army.

ol. ANSON MILLS,
Third United States Cavalry,
International Boundary Commission, San Antonio, Tex.

DEPARTMENT OF JUSTICE,
Washington, D. C., June 9, 1897.

IR: I have the honor to inclose a copy of a letter, dated the 4th tant, from Mr. George P. Money, assistant United States attor- for the district of New Mexico, in relation to the suit of the Gov- ment against the Rio Grande Dam and Irrigation Company. Mr. ney states that he is informed by Col. Anson Mills that "there is umentary evidence in the War, State, and Interior Departments ich should be in the possession of the United States attorney in the l of said cause," and that such papers should be "forwarded at earliest moment, as the hearing of the case is set for Monday, June " If the papers referred to have not been obtained by the United tes attorney—as to which I have no information—I have the honor request that such as are on the files of your Department, and any ers which you can obtain, may be sent to me as soon as possible for nsmission to the United States attorney.

Respectfully,

JOSEPH MCKENNA,
Attorney-General.

he SECRETARY OF WAR

SANTA FE, N. MEX., *June*

SIR: I am in receipt of letters from Col. Anson Mills, United States b
commissioner, at El Paso, Tex., dated June 1 and 2, 1897, in referenc
appointed hearing of the injunction suit filed in the Third judicial distr
of this Territory against the Rio Grande Dam and Irrigation Company, to
the building of a dam across the Rio Grande River at Elephant Butte, N
ico. He advises me that there is documentary evidence in the War, S
Interior Departments which should be in the possession of the United Sta
ney in the trial of said cause. A day or two since—in fact, upon the r
the above first letter—I telegraphed to the United States attorney, who
in Washington, to visit said Departments for the purpose of securing suc
he might need in the matter, advising him of Colonel Mills's suggestion.
know what he has done in the premises, but it is likely that he talked
about the matter while in Washington. I write to ask that if there are
in the above Departments which, in your opinion, would be useful to thi
the preparation and trial of the suit, you would have the same forward
earliest moment, as the hearing of the case is set for Monday, June 14.
fident that the United States attorney has attended to these matters, bu
this out of an abundance of caution.

Very respectfully,

GEO. P. MON
Assistant United States Attorney, New

The ATTORNEY-GENERAL.

WAR DEPARTMEN
Washington, June 11,

SIR: Acknowledging receipt of your letter of 9th instant, i
copy of a communication from Assistant United States A
George P. Money, of Santa Fe, N. Mex., in reference to the
the Government against the Rio Grande Dam and Irrigatio
pany, together with your request that any further papers beari

DEPARTMENT OF JUSTICE,
Washington, D. C., June 15, 1897.

R: I have the honor to acknowledge the receipt of your letter of 11th instant, inclosing original papers in the matter of the suit of Government against the Rio Grande Dam and Irrigation Com-, and to say that I have sent the papers to the United States ney for New Mexico, with instructions to take care of them and rn them to this Department as soon as they have served the pur- for which they are desired. Upon their return to me they will rwarded to you.

Respectfully,

JOSEPH MCKENNA,
Attorney-General.

e SECRETARY OF WAR.

MESILLA PARK, N. MEX., *August 7, 1897.*

DEAR SIR: May I kindly call your attention to the act of one ur Cabinet officers which has caused a great deal of hardship and ssed our local market and kept out $1,000,000 from coming into nited States this year and thereby keeping out indirectly another 0,000 which would naturally have followed the first? We are ed on the Rio Grande, 40 miles up, north of El Paso, Tex. We miles from Las Cruces. Last year, in May, this river was dry ossibly 200 miles in length. The river goes dry nearly every at El Paso, Tex. The Mexican Government has a rock and nt dam across the river at El Paso, Tex., yet the Mexican people bjecting to us poor, drought-stricken United States citizens from ing a dam 100 miles up from El Paso and north of Mexico's line, to store water in times of floods and high water in April. the Mexican people have done just what they claim we ought o do—that is, build a dam. They claim that we would obstruct ation. Now, the river goes dry nearly every year, and even in water a brave man can wade it.

ur Attorney-General stopped us from building our dam on the ids that we would obstruct navigation, yet the Mexican people their dam in. Now, the facts are these. There are some men Paso owning large tracts of worthless land, just up the river El Paso and just above the site of the proposed international the said dam to be built at El Paso by the United States and a nterest given to the Mexican Government to settle a claim for ges, because the citizens of New Mexico and Colorado have been ting their lands for the last fifty years with United States waters would have flowed into old Mexico.

the El Paso international dam is built, then these El Paso land rs can have their lands flooded by backwaters, and get a good for their now worthless land. The said international dam is not ical, because it would require the Atchison, Topeka and Santa ailroad to move their tracks from Anthony, 20 miles north of El into the foothills, where they could not be maintained on int of numerous freshets from the mountains near by, and the would flood all the valley from El Paso to Anthony, 18 miles hills to hills, and there is no farming lands below El Paso to jus- he building of that dam, the river being near the foothills on ide, which leaves most of the valley in old Mexico. Hence, the

water into our ditch.

I am a lifelong Republican, and I am sure we feel the Attorne in our party in southern New Mexico. We fail to see where th tection comes in, as it is only helping old Mexico. If our dam built, then they get theirs.

Yours,

FRANK BU

Mr. MCKINLEY,
President of the United States.

CHICAGO, *January 12,*

SIR: The situation with relation to building an internationa across the Rio Grande at El Paso seems not to be entirely und at Washington. The reports which have been made to the ments, both of Mexico and the United States, seem to me to hav misleading. That an international dam should be built for the of water in such a way as to supply the Juarez Valley on the M side seems to be clear enough, but the method of doing this a necessary extent of such a dam and storage seem to me not t been properly reported. Mexico, of course, wants all the dam the water that she can get. The local influences at El Paso de same thing, and I address this letter to this department as one senting other interests that have as much right to be conside those of the Juarez and El Paso valleys.

The dam proposed to be built will be 60 feet high, covering about 15 miles long and an average, I am told, of about 7 mile The average depth of the water when the dam should be full be about 30 feet. This storage, then, would have a capacity of 2,000,000 acre-feet of water. One acre-foot of stored water, it mated, is sufficient for the irrigation of 1 acre of land in that c

the first place, it is evident that this is an enormous unnecessary nse to the Government. It is not only the extra expense of build- dam much higher than is required, but the greater expense of ng the lands, or condemning them, which would be covered by water and the increased expense of removing the Santa Fe and hern Pacific railroads.

sked one of the general projectors at El Paso a short time ago the ct of such an immense reservoir. His answer was that it would e fine fishing. I asked Col. Anson Mills the same question, and answer was that, in the event of two or three dry years, there ld be enough water in the reservoir still to supply the land. See- that there never have been two or three dry years or a single dry in the Rio Grande, and seeing that so long as snow falls and s, as it does every year, that there can be no such thing as a dry in the Rio Grande, I can not understand that this is an answer e question. While it may be true, although it is disputed, that aking of the waters of the Rio Grande for irrigation in the upper of New Mexico and in Colorado has diminished the supply below, not apparent why more water than is necessary or could possibly ed should be stored on that account. If the object of the inter- nal dam is only to supply water to the Juarez side of the river— is to say, if it is purely to be constructed for the purpose of sup- g Mexico with that of which she has been deprived, then a com- ively small structure would do the work, for it is quite doubtful ore than 75,000 acres of land could be found in the Juarez Valley could take water from the river practically and successfully.

ave been at some pains to find out the amount of land irrigated e Juarez Valley at the time of the treaty of peace at the close of Mexican war, and while it is a difficult task to even approximate am quite convinced that 60,000 acres is beyond the limit of acre- hen taking water in the Juarez Valley from the river. If this ue, then a dam which would produce storage enough for 100,000 would compensate the Mexican Government for the loss of water mpared to that period most amply and fully. If it is proposed clude the El Paso Valley in the irrigation system, then a dam h would store 200,000 acres of water would be equally ample for of these valleys. I have not the data with me to tell whether much water could be stored without elevating the tracks of the ern Pacific and Santa Fe roads, this being a very large part of xpense of putting in this system of irrigation, but I should be ed to believe from what I know of the ground that a moderate tion of the tracks of these two roads would probably be sufficient out their entire removal to another point and still allow the water sufficiently raised to supply 200,000 acres of land. This, how- could be readily ascertained by a civil engineer in a very few time.

conjunction with the international dam and its projectors and ers at El Paso and elsewhere, we find suit begun by the Govern- of the United States against an irrigation company proposing to n a dam at what is known as Elephant Butte, and being perhaps t 125 miles with the meanders of the river up the Rio Grande.

ave nothing to say in favor of this project. I do not believe it is ble, and the arrogant claim of that company that it will take and ol all the water of the Rio Grande by its storage at Elephant e is ridiculous. At the utmost their storage has only a capacity out 235,000 acre-feet, and if they could fill that entirely it would

Beginning above the point where the international dam is p
to be put in, there is what is known as Mesilla Valley, havin
bly 125,000 acres of irrigable land. Perhaps 25,000 or 30,000
this valley is now irrigated by a system of old Mexican ditc
these ditches, like those furnishing the valley at Juarez, hav
so unsatisfactory on account of the dearth of water within
few years that the valley threatens to be depopulated. Is i
that this Government is under greater obligations to the Ju
ley in Mexico than it is to the Mesilla Valley within its own

The Mesilla has been settled, if not as long as the Juarez
perhaps almost as long; at any rate it has been settled for centu
it does seem to an American that an American valley has a
much right to the American water flowing through the Ter
the foreign country of Mexico. If it be the purpose to ma
mendous storage at El Paso in order to monopolize all the
the Rio Grande, and thereby take up ten times as much as
necessary, and to forbid the lands farther up the valley fro
any whatever, the situation is grossly unjust and is one that
to be established by our own Government against our own p

The real truth is that there is plenty of water for everybody
is the amplest water for the irrigation of the Mesilla Valle
valleys above and also the Juarez and El Paso valleys, if the
properly distributed and not stored in excess in any one place
could even be a storage in excess, if it were not such an e
excess, for, all told, the Juarez, El Paso, and Mesilla valle
furthest stretch, do not contain 300,000 acres of irrigable l
there is ample water in the Rio Grande in the dryest year
three to five times this much territory, allowing the ample
water.

There is also another proposed storage immediately at the
the Mesilla Valley by the Mesilla Valley Land and Irrigat

cre-feet of water in the Rio Grande at that point even the
r, and that 200,000 acre-feet of water will provide most
the Juarez and El Paso valleys and the amplest kinds of
immediately above it on the river, the difficulty is at once

n ground against the storage at Elephant Butte is that it
: navigation of the Rio Grande in such a way as to violate
obligations with Mexico. The real reason of the litiga-
is to say, the real reason why this litigation has been urged
ht about and influences have been brought to bear upon the
General's Office—is because the fear that water storage
limit the extent of the storage at El Paso in the Govern-

m that the Rio Grande is navigable or that its navigability
l below the point where it becomes the boundary between
. States and Mexico is too absurd to be seriously considered
ent by anybody who has been there. In the torrential sea-
er would dash to pieces any craft that should be attempted
ed upon it. In the dry season I have frequently walked
bed of the Rio Grande dry-shod. At greater portions of
or instance at El Paso, the river is but a few inches deep.
r, Mexico has herself constructed, at the head of her main
lying the Juarez Valley, nearly opposite the point where
ment station known as Old Fort Bliss used to be located,
g weir or dam which, without anything else whatever,
a complete obstruction to navigation. Mexico, then, is in
n to say that enough water must be left in the river for
., even if this were otherwise possible, when she herself has
barrier that would make this impossible. This of itself
violation of the treaty upon the part of Mexico if the river
gable. The diversion of the water by this weir built by the
Government is quite as much a diversion of the water that
vent navigation below as if it were taken out by any other
dams built by Americans.
rd, my view is this: That those interested have used the
nt to further a plan of building a reservoir at El Paso ten
er than is necessary for the benefit of Mexico and El Paso,
denying to Americans the right to impound the water on
territory farther up the river. That the situation, there-
unjust one to Americans, and one which the Government
ht to inflict upon them, and that the entire situation lies in
the Government storage as proposed is excessive, when, if
de appropriate to the amount of land expected to be irri-
whole cause of friction would be removed and the storage
ld be put in with perfect impunity and without any sort of
letraction to the plan of the Government dam.
ve before intimated, it looks to me very much as if the
General's Office was being used by those interested to accom-
unjust purpose, and I greatly doubt if the real situation in
below is well understood. If it were, I can scarcely believe
ttorney-General would have instituted the proceedings he
the most, that he would have been satisfied with the result
ision of the supreme court of New Mexico. If he is success-
United States Supreme Court, it will amount to the practical
n of millions of dollars' worth of American property, so as
unnecessary excess of water to the two valleys—the El Paso

and the Juarez. The origin of this plan was born at El Paso an been there fostered throughout.

The object of this letter is to call your attention to the true of affairs apart from any official reports which have been heret received by you, and to suggest that all friction and trouble ı be obviated by the simple measure of building such a Govern dam as will serve the purpose, instead of the enormous and unı sary structure contemplated, and that this will promote the dev ment of an exceedingly valuable territory in New Mexico, whic present action of the Government is calculated to destroy.

Very respectfully,

ERNEST DALE OW

WILLIAM MCKINLEY, *President.*

(Duplicate of letter sent to Secretary of State and Secretary o Interior.)

DEPARTMENT OF THE INTERIOR,
Washington, March 8, 1898.

The PRESIDENT.

SIR: I am in receipt of, under date of the 2d instant, by reference from the Secretary to the President, the following Senate resolution:

Resolved, That the President be, and he is hereby, requested, if not incompatible with the public interests, to transmit to the Senate the proceedings of the international commission authorized in the concurrent resolution of Congress of April twenty-ninth, eighteen hundred and ninety, and a subsequent international convention between the United States and Mexico of May sixth, eighteen hundred and ninety-six, and also the correspondence relating thereto with Mexico by the Department of the Interior, Department of War, and Department of Justice, as well as the Department of State, relating to the equitable distribution of the waters of the Rio Grande River, including the draft of an incomplete treaty between said Governments, negotiated between the late Secretary of State, Mr. Olney, on the part of the United States, and Mr. Romero on the part of Mexico, and all the correspondence between said officials relating thereto.

In reply you are advised that this Department has never had any correspondence with Mexico relative to the international commission or the international convention referred to in the resolution, but it has had a considerable correspondence with the Department of State relative to the equitable distribution of the waters of the Rio Grande. This correspondence arose through the conflicting applications of the Rio Grande Dam and Irrigation Company and the Mesilla Valley Land and Irrigation Company for right of way over the public lands for irrigating purposes in New Mexico. The result of that correspondence was that this Department suspended action on all applications for right of way for irrigating purposes over the public lands in the Territory of New Mexico and the State of Colorado where the waters for such irrigating purposes are to be drawn from the Rio Grande or any of its tributaries north of the Pecos River, and action on the conflicting applications of the Rio Grande Dam and Irrigation Company and the Mesilla Valley Land and Irrigation Company was also suspended. A memorandum of that correspondence and of the papers on file in this Department relative thereto is herewith transmitted for your information and for transmittal to the Senate in case you should deem the same advisable.

Very respectfully, C. N. BLISS, *Secretary.*

THE RIO GRANDE DAM AND IRRIGATION COMPANY V. MESILLA VALLEY LAND AND IRRIGATION COMPANY.

Memoranda of papers on file in lands and railroads division of the office of the Secretary of the Interior.

August 19, 1896. Letter from the Commissioner of the General Land Office, dated August 15, 1896, submitting maps and papers in the matter of the conflicting

applications for right of way in the case of the Rio Grande Dam and Irrig Company *v.* Mesilla Valley Land and Irrigation Company, as follows:

MESILLA VALLEY LAND AND IRRIGATION COMPANY.

1. Articles of incorporation, filed in the land office at Las Cruces, N. Mex., ruary 4, 1894, by the company.
2. Proofs of organization, filed in the land office at Las Cruces February 18,
3. Two maps with field notes, filed in the land office at Las Cruces Janua 1896.
4. Separate field notes of canal, filed in the land office at Las Cruces Janua 1896.
5. Separate field notes of reservoir site, filed in the land office at Las Cruces uary 9, 1896.
6. Separate field notes of witness corners, filed in the land office at Las C January 9, 1896.
7. Copy of the company's title or right to appropriate water needed for its ca ditches, and reservoirs, filed in the land office at Las Cruces January 9, 1896.
8. Certificate of secretary of New Mexico as to corporation and irrigation forwarded to Washington, filed in the land office at Las Cruces January 9, 18
9. Statement of amount of water flowing in stream supplying reservoir canals, filed in land office at Las Cruces January 9, 1896.
10. Certificate of company that reservoir sites and canal right of way are de for sole purpose of irrigation, filed in land office at Las Cruces January 9, 189
11. Statement in support of priority claimed by applicant for its application application of Rio Grande Dam and Irrigation Company, filed in land office at Cruces January 20, 1896.
12. Statement without date, relative to application of Mesilla Valley Land Irrigation Company for right of way for reservoir and canal.
13. Affidavit of William E. Baker as to tender for filing, on January 18, of statement in behalf of applicant as to priority in matter of application, filed in land office at Las Cruces January 20, 1896.
14. Letter from register at Las Cruces, dated January 25, 1896, to the Com sioner of the General Land Office, relative to affidavit of W. E. Baker, with le from the receiver and C. T. Jordan attached.
15. Affidavit of president of company relative to surveys represented on r and field notes.
16. Copy of laws of New Mexico authorizing formation of companies for pose of constructing irrigating canals, etc.

RIO GRANDE DAM AND IRRIGATION COMPANY.

17. Map showing location of Dam No. 4 and 6 miles of canal, filed in the office at Las Cruces July 11, 1895.
18. Articles of incorporation, proofs of organization, Territorial laws, etc., in land office at Las Cruces February 3, 1894.
19. Field notes of dam and canal, filed in the land office at Las Cruces Jul 1895.
20. Statement of president of company relative to survey of dam and canal s filed in office at Las Cruces July 11, 1895.
21. Certificate of the company that the reservoir site and canal right of wa desired for the sole purpose of irrigation, and also certificate of the secretar the Territory as to existing laws on subject of irrigation, filed at Las Cr November 23, 1895.
22. Statement of the company as to its priority over the Mesilla Valley I and Irrigation Company, filed at Las Cruces December 6, 1895.
23. Additional statement of the company as to its priorities over Mesilla V Land and Irrigation Company, filed at Las Cruces January 20, 1896.

August 26, 1896. Letter to Secretary from E. C. Roberts, president of Grande Dam and Irrigating Company, dated August 18, 1896, relative to pri of rights of Rio Grande company.

September 15, 1896. Telegram from E. C. Roberts, El Paso, Tex., asking d in action on priority of rights.

September 17, 1896. Letter from same, dated September 12, 1896, asking d until arrival of letter from attorney for Rio Grande Dam and Irrigation C pany.

September 21, 1896. J. H. McGowan, city, enters appearance for Rio Grande Dam and Irrigation Company.

September 26, 1896. Letter from Commissioner of General Land Office, dated September 24, 1896, submitting petition of citizens of Las Cruces asking approval of both applications with priority to Mesilla Valley Land and Irrigation Company.

November 10, 1896. Letter from H. C. Newman, El Paso, Tex., dated October 1, inclosing one from president of Rio Grande Dam and Irrigation Company relative to construction of dam.

November 10, 1896. Letter from J. E. Townsend, El Paso, Tex., dated October 1, relative to case.

November 2, 1896. Letter from Secretary of State, dated October 31, 1896, inclosing copy of letter from Col. A. Mills, U. S. A., asking delay in action on all applications till receipt by State Department of report on a petition by Mexican Government in premises.

November 13, 1896. J. H. McGowan and Holcomb & Keegin, attorneys for Rio Grande company, file certain evidence relating to applications of both companies.

November 18, 1896. Letter from the Commissioner of the General Land Office, dated November 17, submitting letter from E. D. Owen, attorney for Mesilla company, relative to case.

November 7, 1896. E. D. Owen files argument for Mesilla company, in favor of early approval of right of way to company.

November 20, 1896. E. D. Owen files answer to argument against giving priority of right of way to Mesilla company.

December 7, 1896. Letter from Commissioner of General Land Office relative to approved applications for right of way under act of March 3, 1891, on the Rio Grande and its tributaries.

December 9, 1896. Letter from E. D. Owen, dated December 5, 1896, relative to briefs filed by opposite counsel in case.

December 19, 1896. Letter from Commissioner of General Land Office dated December 18, 1896, submitting list of applications for right of way now pending before Department which are affected by Department order of December 5, 1896.

December 24, 1896. Letter from Secretary of State dated November 30, 1896, inclosing report of Col. A. Mills relative to rights of irrigation companies along the Rio Grande, and suggests delay of action on applications now pending until questions now before International Boundary Commission are determined, with attached papers; also copy of resolution of Congress, April 29, 1890.

January 13, 1897. Letter from Secretary of State, dated January 11, 1897, asking that suspension of right of way for companies on Pecos River be relieved and that suspension apply only to tributaries of Rio Grande above international boundary, etc.

January 22, 1897. Letter from W. F. Smith, Chicago, Ill., dated January 17, asking status of application of Mesilla Valley Land and Irrigation Company for reservoir site on the Rio Grande near Fort Selden, N. Mex.

February 2, 1897. Same, dated January 28, asks if no action is to be taken on application till the controversy between the United States and Mexico is finally disposed of.

February 9, 1897. Telegram from register at Las Cruces stating that reply of Rio Grande Dam and Irrigation Company has been forwarded by mail.

February 10, 1897. Telegram from same asking instructions.

February 12, 1897. Telegram from J. A. Harper, El Paso, Tex., asking that work by English company near Fort Selden be stopped.

February 13, 1897. Register at Las Cruces, under date of February 8, 1897, transmits reply of Rio Grande Company to notice that they have no authority to construct dam.

February 15, 1897. Letter from register at Las Cruces, relative to building of a dam near Fort Selden, N. Mex., dated February 6.

February 20, 1897. Telegram from register at Las Cruces, dated February 4, relative to building of dam near Fort Selden; also one dated February 5, relative to same.

April 5, 1897. Letter from Assistant Secretary of State, dated April 1, 1897, inclosing copy of note from the Mexican minister relative to the damming of the Rio Grande by parties in Colorado, New Mexico, and Texas.

May 1, 1897. Letter from Secretary of War, dated April 29, 1897, inclosing copy of opinion of Attorney-General as to right of the Rio Grande Dam and Irrigation Company to erect dam across the Rio Grande.

May 7, 1897. Letter from Secretary of State, dated May 5, inclosing copy of letter from Secretary of War and an opinion of Attorney-General relative to right to erect dams for irrigation purposes across the Rio Grande.

Land Company, Limited, can be subsidized. Sent to Secretary of State J
1896.

June 6, 1896. Letter from Commissioner of General Land Office, dated
returning letter of N. P. Allison with report.

June 25, 1896. Letter from Acting Secretary of State acknowledging rec
letter inclosing letter from N. P. Allison of April 10.

July 3, 1896. Letter from N. P. Allison, dated June 24, 1896, relative to
of water in Rio Grande Valley and the rights of the Rio Grande Irrigatio
Land Company, Limited.

Rio Grande Dam and Irrigation Company and Others.

*Memoranda of letters of record in office of Secretary of Interior, lands an
roads division.*

1. Letter to N. P. Allison, London, England, dated June 11, 1896, in re
letter from him of April 10, 1896.

2. Letter to Secretary of State, dated June 11, 1896, inclosing letter from
Allison of April 10, 1896.

3. Letter to H. L. Newman, dated October 16, 1896, acknowledging let
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4. Letter to J. E. Townsend, El Paso, Tex., dated October 16, 1896, reply
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5. Letter to Commissioner of General Land Office, dated December 5, 18
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6. Letter to Secretary of State, dated December 10, 1896, relative to perm
use of water of Rio Grande for irrigation purposes.

7. Letter to Secretary of State, dated December 19, 1896, inclosing pape
pared by Assistant Attorney-General setting forth claims and contentions
Grande Dam and Irrigation Company and discussing the laws of Colorad
New Mexico relating to water and acts of Congress and rulings of I
Department regarding irrigation.

8. Letter to Secretary of State, dated January 13, 1897, relative to modif
of order of December 5, 1896, suspending action on applications for right
for reservoirs, etc.

9. Letter to Commissioner of General Land Office, dated January 13
modifying order of December 5, 1896.

14. Letter to Secretary of State, dated May 7, 1897, acknowledging letter of May 5, 1897, inclosing copy of letter from Secretary of War and copy of opinion of Attorney-General relative to right to erect dam across Rio Grande above El Paso.
15. Letter to Attorney-General, dated July 1, 1897, acknowledging letter of June 15, 1897, relative to dam across Rio Grande at Elephant Buttes, N. Mex.

DEPARTMENT OF JUSTICE,
Washington, D. C., March 18, 1898.

The PRESIDENT.

SIR: I have the honor to say that the records of this Department do not show any correspondence between it and the Mexican minister, or other authorities of the Mexican Government, relating to the equitable distribution of the waters of the Rio Grande, which is the subject of the resolution of the Senate dated February 26, 1898.

Very respectfully,

JOHN W. GRIGGS,
Attorney-General.

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CONGRESS, Session. } SENATE. { DOCUMENT No. 230.

CONSULAR CORRESPONDENCE RESPECTING THE CONDITION OF THE RECONCENTRADOS IN CUBA, THE STATE OF THE WAR IN THAT ISLAND, AND THE PROSPECTS OF THE PROJECTED AUTONOMY.

MESSAGE

FROM THE

PRESIDENT OF THE UNITED STATES,

TRANSMITTING

IN RESPONSE TO THE RESOLUTION OF THE SENATE, DATED FEBRUARY 14, 1898, CALLING FOR INFORMATION IN RESPECT TO THE CONDITION OF THE RECONCENTRADOS IN CUBA, THE STATE OF THE WAR AND THE COUNTRY, AND THE PROSPECTS OF PROJECTED AUTONOMY IN THAT ISLAND.

APRIL 11, 1898.—Read, referred to the Committee on Foreign Relations, and ordered to be printed.

WASHINGTON:
GOVERNMENT PRINTING OFFICE
1898.

To the Senate of the United States:

I transmit herewith, in response to a resolution of the Senate of the 14th of February last calling for information and correspondence in regard to the condition of the Island of Cuba and to negotiations for commercial relations between the United States and that island, a report of the Secretary of State, with its accompanying correspondence covering the first inquiry of the resolution, together with a report of the special commissioner plenipotentiary charged with commercial negotiations under the provisions of the tariff act approved July 24, 1897, in response to the second inquiry.

WILLIAM MCKINLEY.

EXECUTIVE MANSION,
Washington, April 11, 1898.

The PRESIDENT:

The Secretary of State has had the honor to receive, by reference from the President, a resolution adopted in the Senate of the United States on the 14th of February last, reading as follows:

Resolved, That the President is requested, if in his opinion it is not incompatible with the public service, to send to the Senate copies of the reports of the consul-general and of the consuls of the United States in Cuba, written or received since March fourth, eighteen hundred and ninety-seven, which relate to the state of war in that island and the condition of the people there, or that he will send such parts of said reports as will inform the Senate as to these facts.

Second. That the President inform the Senate whether any agent of a government in Cuba has been accredited to this Government or the President of the United States with authority to negotiate a treaty of reciprocity with the United States, or any other diplomatic or commercial agreement with the United States, and whether such person has been recognized and received as the representative of such government in Cuba.

This resolution contemplates answer being made to two separable inquiries: First, in relation to the present condition of affairs in Cuba, and, secondly, with regard to the action had in view of the overtures of the Government of Spain for a reciprocal commercial agreement covering, particularly, the trade between the United States and the Island of Cuba.

The conduct of commercial negotiations under the authority and in accordance *with the conditions* found in sections 3, 4, and 5 of the existing tariff act approved July 24, 1897, having been intrusted to a spe-

that honorable body of all or of a practical selection of the re
the consul-general and consuls of the United States in Cuba
or received since March 4, 1897, which relate to the state of wa
island and the condition of the people there, appears to leave i
discretion of the President to direct the scope of the informati
so reported and the manner of its communication. The unde
having taken the President's direction on both these points,
honor to lay before him a selection of the correspondence rece
the Department of State from the various consular represents
Cuba, aiming thereby to show the present situation in the islan
than to give a historical account of all the reported incidents s
date assigned by the resolution.

Respectfully submitted.

JOHN SHE

DEPARTMENT OF STATE,
Washington, April 11, 1898.

DEPARTMENT OF STATE, WASHINGTON,
Office of Special Commissioner Plenipote

The PRESIDENT:

In response to the following resolution of the Senate, passe
date of February 14, 1898, and which was referred to the und
for report, viz:

Second. That the President inform the Senate whether any agent of a go
in Cuba has been accredited to this Government or the President of th
States, with authority to negotiate a treaty of reciprocity with the Unit

ıents with Spain, and that a representative of Cuba would be associated for the interests of that island.

date of December 9, 1897, the minister of the United States d was instructed to ascertain the disposition of the Spanish ıent in respect to these negotiations.

date of January 24, 1898, 'a dispatch from Mr. Woodford to this office) advised the Secretary of State that arrange- ere made for the negotiation of a commercial treaty between d the United States; that separate provisions would be made ; and that the Cuban insular government would appoint a to represent that island in the negotiations. This was accom- y a memorandum from the Spanish minister of colonies, stat- the same rules as for Cuba might be applied to Puerto Rico, gesting a basis for the negotiations. This communication was to this office on the 4th of February.

6th of February, the Spanish minister, Mr. Dupuy de Lome, ı the undersigned, and announced that he was authorized to t Spain in the pending negotiations, and that a special rep- ve would arrive from Cuba, under appointment of the insular ent, to act as far as the interests of that island were involved. tioned the name of Señor Angulo as the gentleman who had gested in Cuba for that appointment; but the delegate was ally notified to this office.

arch 17 a note from the Spanish minister, Señor Polo de Bar- dressed under date of the 16th instant to the Secretary of State, rred to this office. In that note his excellency advised this ıent of his appointment by Her Majesty the Queen Regent of conduct these negotiations, assisted by Señor Manuel Rafael as special delegate of the insular government of Cuba, who e aided by two technical assistants also appointed by the Cuban ıent; and, further, that an officer from the Treasury Depart- uld be added in the same character.

cellency announced his readiness to commence the labors of nission so soon as the Government of the United States should e the general plan for carrying on the work.

ctfully submitted, March 17, 1898.

JOHN A. KASSON,
Special Commissioner Plenipotentiary.

CORRESPONDENCE.

LIST OF DISPATCHES.

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.704.—November 17, 1897, 2 inclosures.
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.710.—November 23, 1897.
.712.—November 27, 1897, 1 inclosure.
.717.—December 3, 1897.
.718.—December 3, 1897.
.723.—December 7, 1897.
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.727.—December 14, 1897.
.732.—December 28, 1897.
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.742.—January 8, 1898.
.744.—January 13, 1898, 1 inclosure.
.746.—January 13, 1898, 1 inclosure.
.747.—January 15, 1898.
.749.—January 18, 1898.
.754.—January 21, 1898, 1 inclosure.
.756.—January 22, 1898.
.767.—February 4, 1898.
.773.—February 10, 1898.
legram—February 10, 1898.
.775.—February 15, 1898, 1 inclosure.
.785.—March 1, 1898.
egram—March 3, 1898.
.795.—March 14, 1898, 1 inclosure.
797.—March 17, 1898.
egram—March 24, 1898.
803.—March 28, 1898.
809.—April 1, 1898.
137.—January 10, 1898, from Cienfuegos.

FROM MATANZAS.

95.—November 17, 1897.
97.—December 17, 1897.
99.—January 18, 1898, 1 inclosure.
100.—February 8, 1898.

FROM SANTIAGO DE CUBA

405.—November 15, 1897, 1 inclosure.
407.—November 20, 1897, 1 inclosure.
409.—November 26, 1897.
410.—December 5, 1897.

No. 413.—December 14, 1897.
No. 415.—December 21, 1897.
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No. 421.—January 12, 1898, 1 inclosure.
No. 424.—January 22, 1898.
No. 427.—January 31, 1898.
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No. 434.—February 16, 1898.
No. 437.—February 26, 1898, 1 inclosure.
No. 439.—March 24, 1898.

FROM SAGUA LA GRANDE.

No. 261.—November 11, 1897.
No. 264.—November 20, 1897.
No. 266.—November 25, 1897; 2 inclosures.
No. 270.—December 13, 1897; 2 inclosures.
No. 271.—December 15, 1897.
December 28, 1897.
No. 273.—January 8, 1898; 2 inclosures.
No. 278.—January 15, 1898.
January 10, 1898.
No. 284.—January 27, 1898.
No. 286.—January 31, 1898.
No. 288.—February 17, 1898.
No. 294.—March 12, 1898.
No. 295.—March 14, 1898.
Tel.—March 24, 1898.
No. 299.—March 24, 1898.
No. 297.—March 21, 1898.
Decrees of November 26 and 27, 1897, relating to autonomy in the Island of Cu

CORRESPONDENCE.

Mr. Lee to Mr. Day.

No. 704.] UNITED STATES CONSULATE-GENERAL,
Havana, November 17, 1897.

SIR: I have the honor to transmit herewith several copies, with a translation, of a decree of the Governor-General respecting the "reconcentrados," and the conditions under which they may return to their homes; and also a copy and translation of an article from La Lucha of the 15th instant, reporting an interview with me.

I am, etc.,

FITZHUGH LEE,
Consul-General.

[Inclosure No. 1, with dispatch No. 704.]

GENERAL GOVERNMENT OF THE ISLAND OF CUBA.

PROCLAMATION.

Don Ramon y Erenas, Marquis of Pena Plata, governor-general, captain-general, and general in chief of the army of this island.

Decided to afford the protection due by the Government to the country people concentrated in the towns, I have procured, by all means within the reach of the authority, to better the condition to which the rural population of this island has been reduced, more than by the direct effort of the war measures previously adopted, as a natural consequence of a violent and unjust insurrection, which, having imposed itself on this country, made itself felt from the first moment as an attempt against the national sovereignty and as a work of devastation of the country, but especially as the result of extreme passions let loose against the majority of the Cuban population, honest, active, and loyal, contended with the progress of its increasing culture, satisfied with the prosperity attained by its arts, its agriculture, industry, and commerce, proud of its race and nationality, and which after having undergone without disturbance the transformation from the work of slaves to that of freemen, offered to the world, as a special case of history, one of the most beautiful triumphs of liberty, united with the cause of order, was resolved to preserve in the noble purpose of obtaining through the evolution of ideas and by the peaceful struggles of law the consecration of its aspirations within the Spanish sovereignty.

To that purpose I have directed all the efforts which I have deemed opportune and pertinent, from ordering in a decided and conclusive manner that the reconcentrados be furnished with a daily ration and that the sick in the hospitals be duly attended, to ordering by a recent decree (bando) the reorganization of agricultural and industrial labors, as well as its normalization, to the end that without obstacles nor difficulties the poor people, specially, should be able to find means of subsistence, mitigation for their economic situation, and a possible remedy for their misfortunes.

The work of absolutely suspending the concentration and of remedying immediately the evils derived therefrom not being possible, unless it should be pretended that a crowd, composed largely of women and children, be launched into the fields, exposed, therefore, to suffer even greater evils than that which they may experience by remaining in the towns and which would surely give rise to as serious censures

as the concentration measures have caused, it becomes necessary to proceed in tl matter with the foresight, good sense, and tact imposed by events and which t authority can not ignore.

In view of these considerations and having resolved to make the causes of tl evil disappear as far as possible, prudently, and for the benefit of all, until obta ing the complete reestablishment of the normality in the life of the rural populati I have decided to order as follows:

First. All reconcentrados possessing farms, as owners, lessees, or in partnersh and who possess elements and resources to help themselves, can again establish the selves in same and commence to work, for which they shall count with the prot tion and aid assured to them by the last instructions regarding the reorganizati of agricultural and industrial labors. To this end, they shall obtain from t proper civil or military authority the piece of land where they are to establish the selves, a permit bearing the name of the individuals composing the family, t names of the persons accompanying them, number and kind of animals which th may keep, agricultural and other implements which they may need, and the kind labor they will undertake; and they shall at the same time prove how they w obtain the implements, clothes, and effects which they may need from the mome of their establishment.

Second. Those not comprised in such case, but who attend to the industrial a agricultural labors, as artisans and laborers, can do so, provided they reside in t farm or plantation where they work, that they pass the night within the fortifi place of said farm or plantation, and that they always carry with them their prop personal documents.

Third. To this end the sugar estates, cane fields (colonias de cana), tobacco pla tations, coffee plantations, and other farms or plantations of importance proper defended shall be considered as centers of labor, and their owners are authorized have in them the necessary employees and laborers—the present reconcentrados well as persons who having invoked pardon have complied with the formalities surrender. Special care should be adopted that the proper hygienic measures a carried out which may guarantee the health of the laboring population.

Fourth. In all cases to which the preceding paragraphs refer to, are the owne essees, or partners of the farms or plantations obliged to build centers of defen of the zones of cultivation which they comprehend, and in the exterior circuit which shall be established, in compliance with orders from the general staff the army, the basis of operations of the columns in charge of fighting the rebe and of defending such centers whenever necessary. To this end the owners, lessee and partners of farms or plantations are authorized to carry arms for their defen and the employees and laborers are authorized to carry revolver and machete f the defense of the zone which guarantees the elements of life to their persons a their families' subsistence—after obtaining due permission from the local authoriti in accordance with the owners of the farms or plantations.

Fifth. The families and persons now concentrated who will not be able to enj the benefits which those comprised in the foregoing cases may obtain, either becau they have no piece of land, or because they have no resources with which to esta lish themselves in same, or because they are unable to work, shall remain in tl towns under the direct protection of the boards for the protection of the reconce trados which shall be constituted with Government funds and with the aid of publ charity.

Sixth. These boards shall be immediately organized in the capitals of the provinc by the civil governors, by the alcaldes (mayors) in the municipal districts, and l the deputies from the city governments (ayuntamientos) in the towns, and they sha act under the direction and presidency of the said civil authorities, who for the pu pose of constituting said boards shall associate themselves as follows: (1) To tl military commandants, who are already instructed by the general staff of the obligation to ration the reconcentrados; (2) to the parish priests, whom the eccle astic authority shall inform them of the cooperation they shall tender to su humane purposes; (3) to the municipal physicians, to whom pertains the medic aid of those who may need it; and (4) to the proprietors, merchants, traders, a agriculturists whom the presidents may designate.

Seventh. The protection afforded by these boards shall extend under the sa conditions, not only to the reconcentrados, but to persons coming from the reb camp and who have invoked pardon, while they lack means of subsistence.

Eighth. These boards shall report their works every fifteen days to their respecti presidents or to their superiors, who in turn shall report to the secretary's office the General Government of the island.

Ninth. The civil and military authorities in charge of the execution of these pr visions shall see that they are strictly complied with, under their responsibility.

Havana, 13 November, 1897.

RAMON BLANCO.

[Inclosure No. 2, with dispatch No. 704.]

[From La Lucha, of Havana, November 15, 1897.]

MR. LEE SPEAKS.

With the arrival of the consul-general of the United States of America in this island, Mr. Fitzhugh Lee, and because of the rumors published by the press of his country regarding the attitude which the said consular representative would assume, as well as because of the report published by some Madrid paper relative to a banquet given by the New York filibusters to Mr. Lee, everything connected with the latter has again obtained a certain importance.

Yesterday, by the American steamer *Seguranca*, Mr. Lee arrived from the leave of absence granted to him by his Government.

Desirous of greeting Mr. Lee and of learning the position he would adopt in connection with the new policy which the Supreme Government intends to pursue in this island, we commissioned one of our reporters to interview the distinguished consul-general.

At dinner hour, in the hotel Inglaterra, where he stops, we approached his table and met him in company with the esteemed vice-consul, Mr. Joseph A. Springer.

After exchanging courtesies we inquired, in the first place, for his family. He told us that Mrs. and Miss Lee had remained in Virginia, one of his sons in the Military Academy of West Point, and the other one, Fitz, who accompanied him before, had a position with a railroad company.

Regarding the passage from New York to Havana he told us that he had left the former port last Wednesday, and that on Thursday the wind blew so hard that the *Seguranca*, notwithstanding her excellent conditions, rolled so much that the general fell in his stateroom, causing himself a slight wound on the forehead.

"What instructions have you received from the President?"

"I have received no special instructions of any kind," he answered. "My functions in the future shall be the same as those of the past; namely, to protect the property and lives of the American citizens in this island, and to encourage the development of the commercial interests of both countries. Nothing further."

With respect to the banquet which, according to a cablegram from New York, published by the Lucha on Saturday, had been given to him in New York by the Cuban filibusters, Mr. Lee told us that he had not attended any banquet there, and consequently made no speech; that he only remained in New York two or three days before leaving for this city, during which period he attended lunches offered to him by personal friends, with no political character whatever.

He says such a telegram is untrue, and he does not know the reason which may have inspired the author of same.

We inquired from Mr. Lee regarding the effect which the first measures of General Blanco have produced in the United States, and he told us that they had been received favorably, as would be all tending to make less sensible the horrors of the war. "In my country," he added, "peace is desired. The last words I heard from President McKinley were: 'My sincere wish is that peace be not disturbed.'"

"Aside from official circles," we inquired, "how does the American people think in regard to autonomy, about to be established in Cuba?"

"Outside of official circles," he answered, "not much is known about autonomy, and the popular classes rarely speak of it. Besides, until the new régime does not commence to act it can not be judged, and then they will see how it is received by the Cubans."

We did not wish to occupy any longer the attention of the amiable Mr. Lee, and we took leave of him, thanking him for the deferences he has always shown to the Lucha.

Mr. Lee to Mr. Day.

No. 709.] UNITED STATES CONSULATE-GENERAL,
Havana, November 23, 1897.

SIR: Someone handed me yesterday the inclosed paper, of which I accompany a translation, and which purports to be signed by the insurgent chief in command of the Havana province.

I am, etc.,

FITZHUGH LEE,
Consul-General.

country.

Spaniards, we only consider as enemies those who combat against us.

Cubans, do your duty and the end of the struggle will be abbreviated, a horrors and ruins suffered by our country will terminate.

Long live the Cuban Republic!

November 10, 1897.

J. M. RODRIGUEZ
Major-General, Chief of the Western Departi

Mr. Lee to Mr. Day.

No. 710.] UNITED STATES CONSULATE-GENERAL,
Havana, November 23, 1

SIR: I have the honor to briefly submit a statement of what ap to be the present condition of affairs in this island.

First. The insurgents will not accept autonomy.

Second. A large majority of the Spanish subjects who have mercial and business interests and own property here will not a autonomy, but prefer annexation to the United States rather th independent republic or genuine autonomy under the Spanish fla

Third. The Spanish authorities are sincere in doing all in their to encourage, protect, and promote the grinding of sugar. The ing season commences in December.

Fourth. The insurgents' leaders have given instructions to pr grinding wherever it can be done, because by diminishing the e of sugar the Spanish Government revenues are decreased. It w very difficult for the Spanish authorities to prevent cane bu because one man at night can start a fire which will burn hundr acres, just as a single individual could ignite a prairie by throw match into the dry grass.

Fifth. I am confident that General Blanco, and Pando, his ch staff, as well as Dr. Congosto, the secretary general, with all of I have had conversations, are perfectly conscientious in their des

Havana. The sufferings of the reconcentrado class have been terrible beyond description, but in Havana less than in other places on the island; yet Dr. Brunner, acting United States sanitary inspector here, informed me this morning that the death rate of the reconcentrados in this city was about 50 per cent in other places of the island, and when it is remembered that there have been several hundred thousands of these noncombatants, or pacificos, mainly women and children, who are concentrated under General Weyler's order, some idea can be formed of the mortality among them.

In this city matters are assuming better shape. Under charitable committees large numbers of them have been gathered together in houses, and are now fed and cared for by private subscriptions. I visited them yesterday and found their condition comparatively good, and there will be a daily improvement among them, though the lives of all can not be saved. I witnessed many terrible scenes and saw some die while I was present. I am told General Blanco will give $100,000 to the relief fund.

I am, etc.,

FITZHUGH LEE,
Consul-General.

Mr. Lee to Mr. Day.

No. 712.] UNITED STATES CONSULATE-GENERAL,
Havana, November 27, 1897.

SIR: One of two gentlemen who visited the reconcentrados after they were concentrated in los fosos (the ditches) in this city handed me to-day the inclosed paper. The names of these two gentlemen are not signed to it for obvious reasons.

I personally know the gentleman who brought the communication, and know that he stands high in this community as a man of integrity and character.

The number of reconcentrados here, as I had the honor to report already, have always been less than elsewhere. I am able to say now that they will be taken care of and fed by committees of charitably disposed persons.

The ayuntaminto (city government) of Havana has ordered an additional tax of 5 per cent to be levied upon real estate in this city. I am informed that this sum has already reached the amount of $80,000, and that it is to be devoted exclusively to the relief of the reconcentrados.

The $100,000 reported in a former dispatch as being given by the Governor-General, is in Spanish silver, and is to be applied to the reconcentrados over the whole island.

* * * * * * *

I am, etc.,

FITZHUGH LEE,
Consul-General.

exterminate the Cuban people, for these unhappy creatures r
food only after having been for eight days in the Fosos, if duri
time they could feed themselves with the bad food that the
refused.

On this first visit we were present at the death of an old m
died through thirst. When we arrived he begged us, for God's
give him a drink. We looked for it and gave it to him, and fifte
utes afterwards he breathed his last, not having had even a d
water for three days before. Among the many deaths we wi
there was one scene impossible to forget. There is still alive t
living witness, a young girl of 18 years, whom we found seemin
less on the ground; on her right-hand side was the body of a
mother, cold and rigid, but with her young child still alive clin
her dead breast; on her left-hand side was also the corpse of
woman holding her son in a dead embrace; a little farther on
dying woman having in her arms a daughter of fourteen, cra
pain, who after five or six days also died in spite of the ca
received.

In one corner a poor woman was dying, surrounded by her ch
who contemplated her in silence, without a lament or shedding
they themselves being real specters of hunger, emaciated in a h
manner. This poor woman augments the catalogue already l
the victims of the reconcentration in the fosos.

The relation of the pictures of misery and horror which w
witnessed would be never ending were we to narrate them all.

It is difficult and almost impossible to express by writing the
aspect of the inmates of the fosos, because it is entirely beyo
line of what civilized humanity is accustomed to see; therefore
guage can describe it.

The circumstances which the municipal authorities could
there are the following: Complete accumulation of bodies de
alive, so that it was impossible to take one step without walkin
them; the greatest want of cleanliness, want of light, air, and

to humanity, and so contrary to all Christianity. They did not fail to find persons animated with like sentiments, who, putting aside all fear of the present situation, organized a private committee with the exclusive end of aiding materially and morally the reconcentrados. This neither has been nor is at present an easy task. The great number of the poor and scarcity of means make us encounter constant conflicts. This conflict is more terrible with the official elements and in a special manner with the mayor of the city and the civil authorities, who try by all means to annihilate this good work. The result of the collections are very insignificant if we bear in mind the thousands of people who suffer from the reconcentrations; but it serves for some consolation to see that in Havana some 159 children and 84 women are well cared for in the asylum erected in Cadiz street, No. 82, and 93 women and children are equally well located in a large saloon erected for them in the second story of the fosos, with good food and proper medical assistance, as also everything indispensable to civilized life.

According to the information which we have been able to acquire since August until the present day, 1,700 persons have entered the Fosos proceeding from Jaruco, Campo Florido, Guanabo, and Tapaste, in the province of Havana. Of these, only 243 are living now and are to be found in Cadiz street—82 in the saloon already mentioned and 61 in the Quinta del Rey and the Hospital Mercedes, the whole amounting to about 397, and of these a great many will die on account of the great sufferings and hunger they have gone through.

From all this we deduct that the number of deaths among the reconcentrados has amounted to 77 per cent.

Mr. Lee to Mr. Day.

No. 717.] UNITED STATES CONSULATE-GENERAL,
Havana, December 3, 1897.

SIR: Referring to my cipher telegram of the 1st instant, which I beg to confirm, reading as follows:

ASSISTANT SECRETARY OF STATE, etc.:

Inform the Department that he has learned from the United States consul at Matanzas of an extensive and dangerous conspiracy, under the ex-governor of the province, directed against Americans, action against them to be contingent upon movement of the United States Government in favor of independence to Cuba.

I have the honor to state that rumors have been more or less frequent regarding the riotous intentions of some of the dissatisfied elements toward citizens of the United States dwelling here and in other parts of the island. Any riotous demonstrations here must come from the Spanish noncombatants or from the volunteer forces. I do not think there is any danger from the former, many of whom seem to be in favor of annexation, rather than for real autonomy or for an independent Cuban Republic. And I am inclined to think if General Blanco can manage the volunteers as yesterday he said he could, the trouble from that source is diminishing. The origin of the mobs in this city in the past has always been located in the ranks of the volunteers, who alone have organization and arms.

The Governor and Captain-General is now investigating the Matanzas rumors and will, I am sure, deal promptly with any conspirators found there.

sent to Dry Tortugas, and a coal station be established there. proceedings would seem to be in line with that prudence and for necessary to afford safety to the Americans residing on the islan to their properties, both of which, I have every reason to kno objects of the greatest concern to our Government.

I am, etc.,

FITZHUGH LEE,
Consul-Gen

Mr. Lee to Mr. Day.

No. 718.] UNITED STATES CONSULATE-GENERAL,
Havana, December 3, 1

SIR: I have the honor to state that a representative of a M paper here says that:

Canalejas has said, upon his return from the Vuelta Abajo, or Pinar d province, after the recent combat there between the Spanish generals Ber Hernandez de Valasco, in command of 2,300 men, and two pieces of artille Cuban forces under Pedro Diaz, that although the Spanish troops have di once more their usual valor in the said fight, and the enemy must have heavy losses, yet the province of Pinar del Rio is not pacified, and that th numerous rebel forces still there. That out of about 14,000 Spanish regula in that province, only about 3,000 or 4,000 are able to operate, the balanc sick at the hospitals, garrisoning towns, and otherwise distributed. T believes autonomy premature, and inclines himself to the adoption of e military action for the purpose of finally pacifying said province. That he d believe in altering facts and news. That the truth, no matter how pain bitter it may be, must be known in the peninsula, where public opinion press has been deceived regarding the annihilation of the war and the s pacification of the western provinces, among which that of Pinar del Rio h included.

The Lucha to-day publishes that Canalejas has said "tha

Mr. Lee to Mr. Day.

No. 723.] UNITED STATES CONSULATE-GENERAL,
Havana, December 7, 1897.

SIR:

* * * * * * *

(The consul-general informs the Assistant Secretary of State that neasures for the relief of the reconcentrados are not sufficiently ener-getic to be effective, and that he is advised by the Governor-General hat authority to admit articles of food and clothing from the United States to Cuban ports free of duty rested with the authorities at Madrid.)

I see no effects of the governmental distribution to the reconcen-rados. I am informed that only $12,500, in Spanish silver, had been edicated to the Havana province out of the $100,000 said to have een set aside for the purpose of relieving them on the island, and that eports from all parts of the province show that 50 per cent have lready died and that many of those left will die. Most of these are omen and children. I do not believe the Government here is really ble to relieve the distress and sufferings of these people.

* * * * * * *

I am informed an order has been issued in some parts of the island uspending the distribution of rations to reconcentrados. * * * The ondition of these people is simply terrible.

I inclose herewith an official copy of the comparative mortality in Havana for the six months ending November 30. It will be perceived hat there has been a great increase in the death rate, and without dequate means in the future to prevent it the mortality will increase.

hear of much suffering in the Spanish hospitals for want of food and among the Spanish soldiers. * * * I hear, also, that the Spanish nerchants in some parts of the island are placing their establishments n the names of foreigners in order to avoid their provisions being pur-hased on credit by the military administration, and that the Spanish rmy is suffering much from sickness and famine, and that a great eal of money is needed at once to relieve their condition. In some arts of the island, I am told, there is scarcely any food for soldiers or itizens, and that even cats are used for food purposes, selling at 30 ents apiece.

It is a fair inference therefore to draw from the existing conditions, hat it is not possible for the Governor-General of this island to relieve he present situation with the means at his disposal. * * *

I am, etc.,

FITZHUGH LEE,
Consul-General.

[Confidential.]

Mr. Lee to Mr. Day.

No. 726.] UNITED STATES CONSULATE-GENERAL,
Havana, December 13, 1897. (Received December 18.)

SIR: I have the honor to make the following report:

* * * * * * *

The contest for and against autonomy is most unequal. For it, here are five or six of the head officers at the palace, and twenty or hirty other persons here in the city.

* * * * * * *

Against it, first, are the insurgents, with or without arms, and the Cuban noncombatants; second, the great mass of the Spaniards, bearing or nonbearing arms—the latter desiring, if there must be a change, annexation to the United States.

Indeed, there is the greatest apathy concerning autonomy in any form. No one asks what it will be, or when, or how it will come.

I do not see how it could be even put into operation by force, because, as long as the insurgents decline to accept it, so long, the Spanish authorities say, the war must continue.

* * * * * * *

I am obliged to say, too, that * * * the Government of this island has not been able to relieve from starvation the Cuban population driven from their homes by the Weyler edict, and no longer attempts to do so.

I am, etc., FITZHUGH LEE,
Consul-General.

Mr. Lee to Mr. Day.

No. 727.] UNITED STATES CONSULATE-GENERAL,
Havana, December 14, 1897.

SIR: I have the honor to report that I have received information that in the province of Havana reports show that there have been 101,000 "reconcentrados," and that out of that 52,000 have died. Of the said 101,000, 32,000 were children. This excludes the city of Havana and seven other towns from which reports have not yet been made up. It is thought that the total number of reconcentrados in Havana province will amount to 150,000, nearly all women and children, and that the death rate among their whole number from starvation alone will be over 50 per cent.

For the above number of reconcentrados $12,500, Spanish silver, was set aside out of the $100,000 appropriated for the purpose of relieving all the reconcentrados on the island. Seventy-five thousand of the 150,000 may be still living, so if every dollar appropriated of the $12,500 reaches them the distribution will average about 17 cents to a person, which, of course, will be rapidly exhausted, and as I can hear of no further succor being afforded, it is easy to perceive what little practical relief has taken place in the condition of those poor people.

I am, etc.,

FITZHUGH LEE.

Mr. Lee to Mr. Day.

No. 732.] UNITED STATES CONSULATE-GENERAL,
Havana, December 28, 1897.

SIR: I have the honor to report that I have been informed by the authorities here that they are now engaged in forming an autonomistic cabinet and arranging for the members to take the required oath on the 1st January next, and also for an election to take place thirty days thereafter.

* * * * * * *

My present information is that most of the Spaniards will refrain from voting, and nearly all of the Cubans.

* * * * * * *

The feeling in Havana, and I hear in other parts of the island, is strong against it—the Cubans desiring an independent republic and the Spaniards preferring annexation to the United States rather than autonomy. On the night of the 24th instant there seems to have been a concerted plan over the island to testify the disapprobation of the people to the proposed autonomistic plans of the Spanish Government.

It culminated in this city about 2 o'clock in the morning of the 25th, in the principal square of Havana, where a mob assembled with cries of "Death to autonomy!" and to General Blanco, and shouting "Viva Weyler!" These men came to the square with stones in their pockets, and some of them armed with weapons.

They made a demonstration, too, against the office of the Diario de la Marina, a paper published in this town favoring autonomy, but were dispersed by the military police and soldiers.

* * * * * * *

I am, etc.,

FITZHUGH LEE.

Mr. Lee to Mr. Day.

No. 733.] UNITED STATES CONSULATE-GENERAL,
Havana, December 28, 1897.

SIR: I have the honor to acknowledge receipt of the following telegrams:

WASHINGTON, *December 24.*

LEE, *Consul-General, Havana:*

The following was given to the public, in pursuance of an arrangement this day made with the Spanish minister to that effect: "By direction of the President, the public is informed that in deference to the earnest desire of the Government to contribute by effective action toward the relief of the suffering people in the Island of Cuba, arrangements have been perfected, by which charitable contributions in money or kind can be sent to the island by the benevolently disposed people of the United States. Money, provisions, clothing, medicines, and the like articles of prime necessity can be forwarded to General Fitzhugh Lee, the consul-general of the United States at Havana, and all articles now dutiable by law so consigned will be admitted into Cuba free of duty.

The consul-general has been instructed to cooperate with the local authorities and the charitable boards for the distribution of such relief among the destitute and needy people of Cuba. The President is confident that the people of the United States, who have on many occasions in the past responded most generously to the cry for bread from people stricken by famine or sore calamity, and who have beheld no less generous action on the part of foreign communities, when their own countrymen have suffered from fire and flood, will heed the appeal for aid that comes from the destitute at their threshold, and especially at this season of good will and rejoicing, give of their abundance to this humane end.—John Sherman." Please cooperate with the local authorities to this end.

DAY.

WASHINGTON, *December 27.*

LEE, *Consul-General, Havana:*

Wire immediately character of supplies most needed for Cuban relief. Will money be of more service than food, clothing, etc.?

DAY.

I have also the honor to confirm the following telegram:

HAVANA, *December 27.*

ASSISTANT SECRETARY OF STATE, *Washington:*

Summer clothing, second-hand or otherwise, principally for small women and children. Medicines for fevers, a large proportion being quinine. Hard bread, corn meal, rice, lard, potatoes, beans, pease, salt fish, principally codfish, any canned goods, and especially large quantities of condensed milk, as many persons at first are too feeble for other nourishment. Money will be useful, too, to secure shelter and for nurses, attendants, and many other purposes. Think 50 per cent of the rural population have already died from starvation, the greater number being old men, women, and children.

LEE.

I am, sir, etc.,

FITZHUGH LEE,
Consul-General.

[Telegram.]

HAVANA, *January 5, 1898.*

The consul-general informs the Department that the Government of Cuba is not giving money in lieu of rations to starving people of the island.

Mr. Lee to Mr. Day.

No. 738.] UNITED STATES CONSULATE-GENERAL,
Havana, January 5, 1898.

SIR: I have the honor to acknowledge receipt of the following cipher telegram:

WASHINGTON, *December 31.*

LEE, *Consul-General, Havana:*

Your suggestions are most timely. Arrangements are in progress to organize Red Cross receiving and forwarding bureau in New York and later probably receiving bureau in Havana, under your direction, with Red Cross agents to do detail work.

ADEE.

And to confirm the following telegram:

HAVANA, *January 1.*

ASSISTANT SECRETARY OF STATE, *Washington:*

To list add blankets and flour.

LEE.

I am, sir, etc.,

FITZHUGH LEE,
Consul-General.

Mr. Lee to Mr. Day.

No. 742.] UNITED STATES CONSULATE-GENERAL,
Havana, January 8, 1898.

SIR: I have the honor to state, as a matter of public interest, that the "reconcentrado order" of General Weyler, formerly Governor-General of this island, transferred about 400,000 self-supporting people, principally women and children, into a multitude, to be sustained by the contributions of others or die of starvation or of fevers, resulting from a low physical condition, and being massed in large bodies, without change of clothing and without food.

Their houses were burned, their fields and plant beds destroyed, and ıeir live stock driven away or killed.

I estimate that probably 200,000 of the rural population in the provıces of Pinar del Rio, Havana, Matanzas, and Santa Clara have died f starvation or from resultant causes, and the deaths of whole families lmost simultaneously or within a few days of each other, and of mothers raying for their children to be relieved of their horrible sufferings by eath, are not the least of the many pitiable scenes which were ever resent. In the provinces of Puerto Principe and Santiago de Cuba, 'here the "reconcentrado order" could not be enforced, the great mass f the people are self-sustaining.

* * * * * * *

A daily average of 10 cents' worth of food to 200,000 people would be n expenditure of $20,000 per day, and of course the most humane fforts upon the part of our citizens can not hope to accomplish such a igantic relief, and a great portion of these people will have to be bandoned to their fate.

* * * * * * *

I am, etc.,

FITZHUGH LEE.

Mr. Lee to Mr. Day.

No. 744.] UNITED STATES CONSULATE-GENERAL,
Havana, January 13, 1898.

SIR: I have the honor to inclose a translation of an editorial pubshed in the Diario de la Marina of to-day.

I am, etc., FITZHUGH LEE.

[Translation.—From the Diario de la Marina, of Havana, January 13, 1898.]

Perdonalos, Senor. * * * (Forgive them, for they do not know what they are ing).

They came against the Diario.

They cried out against it.

They stoned it.

And the separatists looked on with joy.

And the *laborantes* (abettors of the rebellion), of all well known, could not restrain eir rejoicing.

It was natural; what a great victory for them!

What was not accomplished by Maceo, nor Quintin Banderas, nor Maximo Gomez, as accomplished yesterday by an unconscious mob; carrying disorder, carrying ot, carrying anarchy into the heart of Havana.

And the foreign consuls witnessed the shameful spectacle from the balconies of the otel Inglaterra!

What shame!

Down with the Diario de la Marina! Death to the Diario de la Marina! And aximo Gomez alive! And Calixto Garcia alive! And the assassins of the martyr iz also alive!

Poor Spain!

What a difference between yesterday and to-day: Yesterday, your sons, liberals d reactionaries, fell in the streets of Madrid, fighting together the common enemy, ainst the oppressors of Europe, against the invincible hosts of the great Napoleon. -day the bravery and the patriotism and the heroism consist in shouting, in outing, and in knifing, if possible, defenseless journalists, against whom the action the laws of the State and in the last extreme, the laws of honor, are sufficient in y civilized country.

But what pains us the most is not this; what our hearts lament at present is not

the sentiment of the honorable profession outraged; no. It is the Spanish sentiment; it is the patriotism which boils in our veins with more heat; with a hundred times more enthusiasm than in that of those ——— braves, that in a mob, and in an anonymous manner, have pretended to offend us, without understanding, unfortunates, that what they have trampled on, that what they have dragged through the mud, has been the majesty of the law, the principle of authority, and the honor of the country.

What will say the representatives of foreign powers who witnessed the shameful spectacle of yesterday? What effect will this great scandal cause in the United States, where they watch our discords, where they await our errors, where they count on our folly to take possession of the apple which they have been waiting for one hundred years to ripen and thereby fall in their hands?

This, this is what pains us; this, this is what shames us; this, this is what frightens us, and not the personal danger which we may risk; if with our blood and with the sacrifice of our lives we could avoid the consequences that for our beloved country we foresee and feel as a fatal result of the sad spectacle which happened in the streets of Havana yesterday, the shedding of our blood and the sacrifice of our blood we would consider as well employed.

"This is the greatest victory which up to the present has been gained for the independence of Cuba by Maximo Gomez," was said to us by an invalid chief of the army, a veteran in the past insurrection and of the African war, who came to the Diario de la Marina as soon as he received notice of the uprising.

Yes, a victory for Maximo Gomez and a day of rejoicing for the enemies of Spain. This is what signifies, before all and above all, the seditious tumult of yesterday.

Mr. Lee to Mr. Day.

No. 746.] UNITED STATES CONSULATE GENERAL,
Havana, January 13, 1898.

SIR: I have the honor to transmit herewith some statistics sent me about the mortality in the town of Santa Clara, the capital of Santa Clara province, situated about 33 miles south of Sagua, which numbers some 14,000 inhabitants. It will be noticed that there were 5,48[illegible] deaths in that town in the seven years previous to 1897, which included 1,417 in one year, from an epidemic of yellow fever, while in 1897, owing to the concentration order, there were 6,981; the concentration order went into effect in February.

In that year, 1897, the month's death rate for January was 78, but in February, the first month of reconcentration, there were 114, and there has been a gradual increase since, as you will see, until in December, 1897, the number of deaths was 1,011. I refer to this as a specimen of the mortality on this island in consequence of the "reconcentration order" of the late Captain and Governor General, Weyler.

I am, etc.,

FITZHUGH LEE,
Consul-General.

[Inclosure in No. 746.]

STATISTICS OF DEATH RATE IN SANTA CLARA.

(A town of 14,000 inhabitants.)

1890	578	1896 (epidemic of yellow fever among army and Cubans)	1,4[illegible]
1891	720		
1892	596		5,4[illegible]
1893	619		
1894	687	1897 (no epidemic)	6,9[illegible]
1895	872		

(1,492 more than in seven previous years.)

Concentration order in February, 1897—Monthly death rate.

.....	78	August.....	645
concentration)	114	September	630
.....	333	October	884
.....	524	November	1,037
.....	539	December	1,011
.....	531		
.....	655	Total	6,981

Sample month, December, 1897.

	Number of deaths.	Number of patients.
al.....	143	170
pital.....	23	700
Hospital.....	2	10
or carts.....	228	.....
mily.....	553	.....
.....	2	.....
.....	951	.....

Mr. Lee to Mr. Day.

UNITED STATES CONSULATE-GENERAL,
Havana, January 15, 1898.

have the honor to confirm the following cipher telegram to you:

HAVANA, *January 12.*

officers with a mob at their heels make an attack upon four autonomist s. The rioting continued until 1 p. m.

HAVANA, *January 12.*

nd serious disturbances as consequence of intense prevailing excitement. omists began trouble, confining their attacks to autonomists. Rioting t many rumors. Consulate-general and palace heavily guarded.

HAVANA, *January 13.*

condition of affairs quiet. City under guard. Mobs yesterday cried, autonomy and Blanco, and long live Weyler. The conflict is between ictions. Some of the rioters proposed going to United States consulate. needed now, but may be later.

HAVANA, *January 13.*

officers and mob attacked three newspaper offices, not four (as reported . Soldiers joined the mob when sent to defend the newspapers, and out- alace shouted death to Blanco and autonomy. If Americans are in danger ld be ready to move promptly for Havana. Uncertainty and excitement d.

HAVANA, *January 14.*

sualties. Disorder last night and this morning and crowds shouting death and autonomy. Fears nothing very grave at present.

HAVANA.

All quiet.)

HAVANA, *January 15.*

evails.

also the honor to acknowledge the receipt of the following legram, received yesterday from you:

WASHINGTON, *January 14.*

al-General, Havana:

ts him to maintain frequent communication with United States squadron st as to state of affairs at Havana. He should also frequently advise the it of the situation.)

am, etc.,

FITZHUGH LEE.

Mr. Lee to Mr. Day.

[Confidential.]

No. 749.] UNITED STATES CONSULATE-GENERAL,
Havana, January 18, 1898. (Received January 22.)

SIR: The recent disorders in this city are to be primarily attributed to a group of Spanish officers who were incensed at articles appearing in three of the newspapers of Havana, El Reconcentrado, La Discusion, and El Diario de la Marina. The first was very pronounced against General Weyler and his methods, the Discusion had been suppressed by Weyler, but its publication was permitted to be resumed by Blanco, and the last had been an ultra Spanish organ, but had been converted by the present authorities to autonomy.

It is probable that the Spanish officers were first provoked by the denunciations of Weyler in the columns of one of these papers and determined to stop it, and afterwards, being supported by the mob, turned the demonstration into an antiautonomistic affair.

* * * * * * *

I send to-day an analysis of the autonomistic plan. The intense opposition to it on the part of the Spaniards arises from the fact that the the first appointment of officers to put into form its provisions were made generally outside of their party in order to show the Cubans in arms that autonomy was instituted for their benefit and protection.

* * * * * * *

The intelligent Spaniards * * * see no prosperity in the future, but rather other wars and more confusion in the same old attempts to make the waters of commerce flow in unnatural channels. The lower Spanish classes have nothing in mind when autonomy is mentioned except Cuban local rule; hence their opposition.

* * * * * * *

I am, etc.,

FITZHUGH LEE,
Consul-General.

P. S.—The paper referred to will go by the next steamer.

Mr. Lee to Mr. Day.

No. 754.] UNITED STATES CONSULATE-GENERAL,
Havana, January 21, 1898. (Received January 25.)

SIR:

* * * * * * *

I have the honor to transmit herewith a document containing "Observations regarding the decree which established on the Island of Cuba the autonomic régime," and two copies of the Havana Gazette containing the decree referred to.

I am, etc.,

FITZHUGH LEE,
Consul-General.

[Inclosure No. 1, with dispatch No. 754. Translation.]

OBSERVATIONS REGARDING THE DECREE WHICH ESTABLISHES ON THE ISLAND OF CUBA THE AUTONOMIC RÉGIME.

1. Article 3 grants to the insular chambers, together with the Governor-General, the power to legislate regarding colonial affairs "in the form and terms designated

law." What law? Those decreed by the Cortes at Madrid? It appears so, ause the provisions of a general character emanating from the said Cortes shall eive the name of laws, while the colonial legislative provisions shall be called tutes. And if the Cortes of the Kingdom is the one to fix the form and terms of colonial resolutions, it has a powerful arm in its hands and can annul the action the insular chambers.

. The insular representation is composed of two bodies, with the same authority— chamber of representatives and the council of administration. Article 4 pro- es that the chamber is formed by popular election; but that concession, which first seems extensive, when examined in its relations with the other powers given the insular representation, is practically deficient. No colonial resolution can be force unless it has been approved by the chamber and the council. The council, as shall see later, from the nature of its composition, will be controlled by the Gov- ment in such a manner that the representatives of the people to the chamber will ays find themselves in the power of the Government in some way. They will not able to do anything, because if the council does not approve, or should modify decision of the other house—the chamber—the latter's decisions will have no ct. The veto granted by article 43 will not be required.

. The council of administration is composed of 25 members; 17 are appointed ectly by the Government; the remaining 18 are elected by popular vote. To be ted a member of said council it is necessary to be a Spaniard (Spanish subject), ears of age, and possessing an income of $4,000 for two years previous to election. formation of the council will be therefore controlled by the Government, because Government will appoint unconditionally the 17 members, and it will be very for the Government to find one or more votes among those owing their election he people, the more so as the conditions required to be a councilor are favorable those near the Government. In order to pass any measure the presence of a ority of those composing this legislative body is required. It will be very diffi- to have all the 18 members elected by the people vote as a unit, and the absence ne or two will be sufficient to give the governmental members control of the body, he vote be a tie.

the members elected should stand together on any measure objectionable to the ernment, they could be sent to their homes by the Governor-General, and he can ruct or direct the election of others more accommodating. On the other hand, members by governmental appointment can not be removed—their offices or tions cease with their lives. The Governor-General can not remove them. And his end they will be carefully selected as faithful instruments of the Government, hose hands the whole autonomistic machine will be placed. It is known that in ada all senators are appointed by the Government; but it should be remembered the Governor-General appoints them, with the advice and consent of its coun- rs or ministers, and that these counselors are elected by the parliament, and parliament by the people, the result is, that in Canada the senators are repre- atives of the people, while here in Cuba the Government can control them.

As if the authority to veto was not sufficient (art. 43) and the power did not t to suspend, close the sessions, and adjourn both bodies, or either of them, by decree of the Governor-General, article 30 grants more authority or power to ent [prevent ?] or annul the freedom or liberty of the discussions of the colo- parliament, when, in the opinion of the Governor-General, the national interests be affected by a colonial statute. The bill in question can not even be discussed ess previously authorized by the central government, and it is a limitation or riction which has no precedent in any known autonomistic legislation. It is roper because the restriction arises before the debates show the character of the sure to be discussed. It reveals, besides, a mistrust or want of confidence of the e discussion of the subject.

. Governor-General may decree that all bills or colonial statutes may be, in his nion, contrary to the national interest, and that nothing should be discussed in local legislative bodies without the previous consent of the Madrid Government. guaranties are for the Madrid power; there are none for the colony, except the named in article 43, which fixes the limit within which the Madrid Government to decide regarding the right of a veto which a colonial statute may have eived from the Governor-General.

. Article 36 grants exclusive power to the Cortes of the Kingdom to determine expenses of sovereignty which the colony has to pay and the necessary receipts over them, for the Cortes can alter them at pleasure. Therefore the colony has direct vote in a matter of so great importance. It may be said that she is wed to appoint her deputies to the Cortes of the Kingdom, and that through m the colony can be heard. But the colony's voice will be lost, because their nber would be insignificant before the remaining deputies of the nation. And it happen that the expenses of sovereignty, put by the Cortes on the colony, orb all of its receipts, because neither of the two houses (chambers) can delib-

deputies. These deputies appoint their president; if they do not agree, th
in age presides. And the president has the casting vote. Let us suppose th
deputies to be very patriotic, which is, by the way, supposing a great dea
they will never be more patriotic than the peninsular delegates, it will re
they will not agree, and then the eldest will decide. As there are a large
of peninsular deputies and a very small number of insular deputies to sele
care will be taken that some aged peninsular deputy be appointed on said co
and he would be the one to decide. The matter would have been simplified b
that the eldest peninsular deputy would be the one to make the lists, as suc
the result.

8. Article 40 also refers to the schedules of the merchandise, which will a
the privileged lists. The decree only says that they shall be made by mut
sent (meaning Cuban and Peninsular deputies). It does not make any refe
the case when there is no mutual consent, which makes us suppose that t
procedure recommended in the other lists will be observed. The eldest Pe
deputy will therefore make the said schedules.

9. The Governor-General has the power to suspend the constitutional gua
apply legislation of public order (ley de órden público), and adopt any mea
may deem fit to maintain peace, etc. This power the Governor-General can
at will, without any limitation, because he is not obliged to hear the opinio
council of secretaries (ministry), and thus the whole political system of the
lies with the Governor-General. The latter can therefore find any pretext fo
martial, the application of the code of military justice, and all that series of p
tions and orders which have caused so much harm, and which rob the citiz
guarantees and protection.

10. The distribution of the public debt of Cuba remains completely in th
and subject to the decision of the Cortes of the Kingdom, which will try t
to Cuba as much of it as it can, so that Spain will pay the smallest part.

Beyond all this, even, the fact remains and makes useless, while it ex
orderly and pacific development of the autonomistic régime, and this fac
existence of the volunteers in arms. The political party in power is unarm
no force of its own, while the Spanish radical (intransigente) party, which
opposition, is armed, having on its side the armed volunteers. Under suc
tions there can be no genuine autonomistic government, because the opposit
ride over, whenever it pleases, the authority of the local government, and o
we had a very recent example, and it can have it repeated whenever the
Spanish (intransigente) party so desire.

Mr. Lee to Mr. Day.

And I beg to confirm the following telegrams to you:

HAVANA, *January 15.*

(All quiet.)

HAVANA, *January 16.*

All quiet.

HAVANA, *January 17.*

(Reports supplies by Carcho a week since delivered to-day. Regulations and recent rioting causes of delay. Apprehends no difficulty as to landing supplies and reports arrival to-day of *Vigilancia.*)

HAVANA, *January 18.*

All tranquil.

HAVANA, *January 19.*

Reports that November 4 decree admitting cattle into Cuba free until January 10 is extended to March 10 of present year, with conditions unchanged, and adds that quiet prevails.

HAVANA, *January 21.*

All quiet.

HAVANA, *January 22.*

(Reports no foreign naval vessels at Havana, but that two such German ships are expected to arrive during January.)

I am, etc., FITZHUGH LEE.

Mr. Lee to Mr. Day.

No. 767.] UNITED STATES CONSULATE-GENERAL,
Havana, February 4, 1898.

SIR: I have the honor to report that I have received $1,743.46 from various sections of the country, in addition to the $5,000 first sent, making a total of $6,743.46, which have been placed to the credit of the unofficial fund. Of this amount about $3,000 have been already expended in purchasing food, paying railroad freights on provisions sent away from the city, and the salary and expenses of an agent to attend to the purchase and distribution, who acts with the committee appointed by the government of the city. It will be necessary to keep sufficient funds on hand to meet the expenses necessarily incurred in the work here.

Most of the money I have received has been in small sums, the $1,743.46 being contributed by 37 different persons. Last mail brought me $200 from an unknown donor in Baltimore, Md. I do not see any diminution in the numbers of the suffering poor on this island, except by the daily deaths occurring everywhere from starvation. The present population, which has been concentrated at various places under Weyler's proclamation is still there, not daring to go out to their homes in the interior, if said homes were still in existence, so they continue to herd together with no employment and with but little means of subsistence outside of what we are now trying to afford them. The condition of the reconcentrados is worse in the vicinity of the smaller towns, because they can get something by begging in the larger ones, and hence the death rate is greater in the small towns.

The fact that the greater majority of these poor people are principally women and children makes the sad story of suffering and death more heartrending.

I am, sir, etc., FITZHUGH LEE,
Consul-General.

MELENA DEL SUR.

The unhealthy conditions of this town and the total want of resources m completely impossible for the mayor to remedy the present miserable situat the people, who die in great numbers from starvation, fever, and smallpox, wh vastly spreading, owing to the lack of vaccination virus or the necessary fu acquire it with.

There are other towns in the same conditions, as, for example, Guines, Cat and Madruga, whose situation could be, in a small degree, relieved if the co people were allowed to leave the town freely in search of food, which is very s In some towns this is entirely prohibited; in others they are obliged to pay and, not having anything to eat, how can they pay a tax? In every town yo the first thing you notice is the unhealthy condition of the men, and their want of physical strength, which prevents them even from making an effort t cure the means of support.

CATALINE DE GÜINES.

The condition of the reconcentrados in this town is very sad and desperate. are no "zones for cultivation," and they are therefore not allowed even with a tary pass to leave the town in search of work or food, which latter is so scarc one must walk 4 or 5 miles before finding a sweet potato. Among these poor are many who have not even the meanest hut for a dwelling place and wh nobody willing to help them in the least thing.

In these districts the liberty given by General Blanco to the reconcentrad farce.

GÜINES TOWN.

The land near the town which comprises the "zone for cultivation" has been by four Spaniards, who have done this by means of their wealth and influence present situation. They employ the few reconcentrados who are able to work ing them 30 or 40 cents a day. Nobody can leave the town in search of work out a pass from the military commander, which pass is good for a month only an 20 cents. These workmen have to leave the town at 6 in the morning, and not able to take the meals with them, are obliged to work until 6 in the evening wi any nourishment. The same thing happens to all those who go in search of The women who leave the town in search of vegetables, even on their own which are now completely abandoned, are sometimes deprived of them on thei back by the guerrillas.

In fifteen days 200 reconcentrados have died in Guines from starvation and lack of resources. Many of the sick sleep on the floor and in the piazzas.

One of the few real protectors of the reconcentrados, in fact a heroic one, is a man named José Amobedo, whose father and mother have died attending to th fering poor, and who himself has given up eight houses that belonged to h dwelling places for the reconcentrados, all the contents of a grocery store th

ainst him here. I think him excellent man, but in unfortunate posi-
on. Three serious combats reported within a week; in each insurgents
ctorious.

Mr. Lee to Mr. Day.

[Confidential.]

o. 775.] UNITED STATES CONSULATE-GENERAL,
Havana, February 15, 1898.

SIR: I have the honor to transmit herewith a letter, with its transla-
on, signed by the insurgent commander in chief and addressed to the
resident of the United States. The said letter was delivered by a
essenger, who at once departed, before I saw or had any communication
ith him.

I am, etc.

FITZHUGH LEE,
Consul-General.

[Inclosure in No. 775.—Translation.]

ILLIAM MCKINLEY,
President of the United States.

SIR: The heroic Cuban people possesses, as a characteristic quality of its moral
ing and developed to a high degree, one of the most noble sentiments, namely,
atitude; whoever has done well for Cuba wins for himself forever the lively
ognition of the sons of Cuba's soil.

Your great people have given to the whole world an example of lofty virtue, and to
s shame and stain of Spain, not only has it shown compassion before the great
sfortunes brought on Cuba by the ferocious Spanish policy, but has extended a
lping hand to the unhappy victims of the warfare carried on by the army of that
tion.

The gratitude of this people must be on a par with that great and generous impulse,
d if Cuba, by its geographical position and the necessity of its commercial exist-
ce, is called to maintain, once that it is free, and for the mutual benefit of both
untries, closer relations with your great republic than with any other nation what-
er, from this day forward Cuba will consider herself bound by a closer tie in the
ection it bears for the noble American magnanimity.

However true and minute may be the reports that you have heard, never will you
able to form a just conception of all the bloodshed, the misery, the ruin and the
rrow caused to afflicted Cuba, to obtain her independence, and how the despotic
irit of Spain, irritated to the last degree before the most just of all rebellions, has
velled in the most implacable destruction of everything, lives and property. The
tion which at one time accepted the inquisition and invented its tortures lastly
nceived the concentration scheme, the most horrible of all means, first to mar-
rize and then to annihilate an entire people, and if it has stopped in the path of
struction it is due in great measure to the cry of indignation which the knowl-
ge of such horrors unanimously drew from the States over which you govern.

The people who are saved from extinction and whose evils your gifts assuage are
e people for whose liberty we daily shed our blood on the fields of battle; the
untry whose independence we now conquer at the point of the sword for them is
so for us; blood of our blood and flesh of our flesh, we must rejoice with them
their joys as we weep and sympathize with them in their sorrows and grief.

Be not surprised, then, that as the general in chief of this Cuban army I am so
eply moved at the wave of compassion which agitates your noble country, and
at I accede to the requests of the patriots I command to appear before you, the
presentative of the great nation, as the exponent of our immense gratitude.

I have, therefore, sir, to fulfill a conscientious duty by setting forth a fact, which
beg you will please transmit to the knowledge of the persons to whom is recom-
ended the philanthropic mission of succoring the unhappy destitute Cubans, and in
der that ignorance of certain antecedents may not deprive many needy ones of the
joyment of that noble American charity.

The revolution, as absolute master of the country, has never prohibited any citi-
n, whatever his nationality, from earning his living, and it has happened that as
on as the barbarous concentration decree was derogated innumerable families
ave left and still leave the city for the field, impelled by hunger to wrest from the

No. 785.] UNITED STATES CONSULATE-GENERAL

Havana, March 1, 18

SIR: I have the honor to report that the distribution of food, cines, and clothing to the destitute on this island is satisfactoril ceeding. The work has been well organized and systematized the immediate supervision and direction of Miss Clara Barton, dent of the Red Cross Society of the United States, and her a able, and experienced assistants.

At first the relief was confined to the city of Havana and its rounding sections. Now that the proper organizations have formed in the said sections the supplies have been and are being ually extended to other portions of the island, while some of the ports have received the necessary articles direct from New York course, when the number of the poor and destitute is so large almost impossible to relieve large numbers in each locality, but able to state with confidence that under the present system of dist tion the supplies are not lost or wasted, but reach those for whom are intended.

I am, etc.,

FITZHUGH LEE,
Consul-Gener

[Telegram.]

Mr. Lee to Mr. Day.

HAVANA, *March*

Have established fine asylum for destitute small orphans regar nationality. Money sent by you will be applied purchase food for orphans.

LE

best means of doing so I inclose the latter without date, but received to-day.

I am, etc.,

FITZHUGH LEE,
Consul-General.

[Inclosure in No. 795.]

Mr. Barker to Mr. Lee.

DEAR SIR: I will thank you to communicate to the Department as quickly as possible the fact that the military commander and other officers of the military positively refuse to allow the reconcentrados to whom I am issuing food in its raw state to procure fuel with which to cook this food.

In addition they prohibited this class of people (I am only giving food to about one-fifth of the destitute—the authorities have quit altogether) from gathering vegetables cultivated within the protection of the forts, telling them the Americans propose to feed you, and to the Americans you must look.

Yours, very truly,

WALTER B. BARKER, *Consul.*

Mr. Lee to Mr. Day.

No. 797.] UNITED STATES CONSULATE-GENERAL,
Havana, March 17, 1898.

SIR: I have the honor to inform the Department that by a decree dated March 5, 1898, the Governor-General has prorogued in all its parts to the 31st of March, 1899, the decree of the general government of the 19th April, 1897, relative to the suspension of legal proceedings against real estate, with the reservation, however, of what may be agreed upon in the matter by the insular chambers in due season.

I am, etc.,

FITZHUGH LEE,
Consul-General.

[Telegram.]

Mr. Lee to Mr. Day.

HAVANA, *March 24, 1898.*

Work of relief progressing most satisfactory. To-morrow arrangements made for 22 cars of supplies for Cienfuegos, Cardenas, Sagua, Calibarien, and Santa Clara, and other places. Railroads will carry special trains through free of charge. Have been greatly assisted by Mr. Klopsch.

LEE.

Mr. Lee to Mr. Day.

No. 803.] UNITED STATES CONSULATE-GENERAL,
Havana, March 28, 1898.

SIR: I have honor to report that instructions have been given by the civil governor of Havana that the alcaldes and other authorities shall not give out any facts about the reconcentrados, and if any of the American relief committees should make inquiries concerning them, all such inquiries must be referred to him.

I am, etc.,

FITZHUGH LEE,
Consul-General.

Mr. Lee to Mr. Day.

No. 809.] UNITED STATES CONSULATE-GENERAL,
Havana, April 1, 1898. (Received April 5.)

SIR: With reference to the telegram I had the honor to transmit to you yesterday to the effect that the Governor-General had issued a decree terminating concentration of the country people, permitting them to return to their homes, and advising their employment on public works, I beg to inclose a translation of the articles of the decree referred to.

I am, etc.,

FITZHUGH LEE,
Consul-General.

[Inclosure No. 1 with Dispatch No. 809.]

TRANSLATION OF THE ARTICLES OF GENERAL BLANCO'S PROCLAMATION OF THE 30TH MARCH, 1898, SUSPENDING THE RECONCENTRATION.

ARTICLE 1. From the publication of the present proclamation (bando) in the Gazette of Havana the reconcentration of country people throughout the island is hereby terminated, and they are authorized to return with their families to their homes, and to dedicate themselves to all kind of agricultural labors.

ART. 2. The boards of relief and all civil and military authorities shall furnish them the means, within their power, to enable the rural population to return to their former places of residence, or those which they may now select, facilitating them the aid which they may respectively dispose.

ART. 3. At the instance of the council of secretaries, and through the department of public works, the preparation and immediate realization of all public works necessary and useful to furnish work and food to the country people and their families who, through lack of means, truck farms, or want of agricultural implements, may not be able to return immediately to the fields, shall be proceeded with, as well as the establishment of soup kitchens, which may settle and cheapen such services.

ART. 4. The expenses which the compliance with this proclamation (bando) may originate, as far as they may exceed the means disposed of by the boards of relief, shall be charged to the extraordinary war credit.

ART. 5. All previous instructions issued regarding the reconcentration of the country people and all others which may be in opposition to the compliance of this proclamation are hereby derogated.

HAVANA, *March 30, 1898.* RAMON BLANCO.

Mr. McGarr to Mr. Day.

No. 137.] CONSULATE OF THE UNITED STATES,
Cienfuegos, January 10, 1898.

SIR: All the sugar mills in this consular jurisdiction, 23 in number, have been grinding since the first of the month, and at the busy centrales the various industries incident to the gathering of the crop and the manufacture of sugar are in full and steady operation.

Several of the principal estates are owned by American citizens and corporations, and most of their skilled employees are brought from the United States.

The demand for labor on the sugar estates has drawn from the towns a great portion of the unemployed laborers and given employment to the male "concentrados," many of whom were in a state of enforced idleness and destitution. As a consequence, few of them are now seen here and the labor "congestion" has been relieved.

Small predatory parties of insurgents make frequent attempts to fire the cane fields, and it requires constant and active vigilance to prevent their destruction. The dry weather and the high winds prevailing at this season render it a simple matter for one person (who can easily conceal himself in the tall cane) to start a conflagration that will, unless promptly extinguished, destroy hundreds of acres in a few hours.

Hence the almost impossibility with the utmost watchfulness and ısing every practicable safeguard to prevent some loss of cane by the ires started, often under cover of darkness, by the stealthy incendiaries amiliar with the locality and always on the alert for an opportunity to pply the torch.

The sugar crop is the support of all classes and especially of the ıboring class, and should it be in large part destroyed a famine in eality would be inevitable.

I am, etc.,

OWEN MCGARR,
United States Consul.

Mr. Brice to Mr. Day.

[o. 95.]

CONSULATE OF THE UNITED STATES,
Matanzas, November 17, 1897.

SIR: I have the honor to submit the following report concerning ıresent condition of affairs in this province and city.

New civil governor, Francisco de Armas, assumed the duties of his ffice Thursday, 11th instant. As the autonomist * * * governor f this province, his reception was cold and informal. Spaniards, as vell as Cubans, are not in sympathy with proposed autonomy and reforms. ı memorial to Her Majesty, Queen Regent of Spain, extensively signed ıy leading Spaniards of province, asking that reform bill be not igned. This will be cabled in a day or two.

* * * * * * *

Starvation.—No relief as yet afforded the starving thousands in this ırovince. Several days ago an order from Captain Gin was given muıicipal authorities to issue rations and clothing, but no attention is ıaid the order.

* * * * * * *

Death rate in this city over 80 persons daily, and nearly all from vant of food, medicines, and clothing. As I write this a dead negro voman lies in the street, within 200 yards of this consulate, starved to leath; died some time this morning, and will lie there, maybe, for days. The misery and destitution in this city and other towns in the interior ıre beyond description.

A general order has been issued allowing reconcentrados to return o the country, but the restrictions placed in order are such as to pracically prohibit. If they went, what can they do without money, ood, or shelter? Only those who can obtain employment on sugar ılantations can live. Insurgents say no one will be allowed to grind n province of Matanzas. The situation is indeed deplorable, and I am ree to say no real help can be expected from Spanish Government, and he fate of the remaining reconcentrados is slow, lingering death from ıtarvation.

* * * * * * *

Insurgents are numerous and quite active the past ten days. In an ıngagement Saturday, 13th, near Mocha, 8 miles from this city, Spanish ıroops were defeated with serious loss and forced to retreat. Several ıugar plantations report cane burned by insurgents, and the general ıpinion is little or no sugar will be made this season.

I am, etc.,

A. C. BRICE,
United States Consul.

Mr. Brice to Mr. Day.

No. 97.] CONSULATE OF THE UNITED STATES,
Matanzas, December 17, 1897.

SIR: I have the honor to report the following Cuban news in this province, taken from personal observation and reliable sources of information:

Concentrados.—Relief offered these and other poor people by Spanish authorities is only in name. I have personally visited (on several occasions) head masters of distributing stations. Two thousand rations were given out, for a few days only, to 8,000 persons. * * * There are more than 12,000 starving people in this city to-day. One out of 4 (or 6) received the following ration: 2 ounces rice, 1½ ounces tassajo (jerked beef), and sometimes a small piece of bread, per diem. Imagine starving people being relieved by such rations! Even this ration of food has been discontinued since 11th inst. Death rate has diminished somewhat; now about 63 daily. There are less people to die.

The scenes of misery and distress daily observed are beyond belief Here is one out of hundreds. In a family of seventeen living in an old limekiln, upper part of city limits, all were found dead except three, and they barely alive. * * * A few of the strongest of these people have been sent out to sugar plantations, which expect to grind. They get 30 cents per day and board themselves. General Blanco's order, allowing reconcentrados, owners of plantations and farms, to return and cultivate crops, etc., is inoperative and of no avail. Several of our American citizens, owners of land, have repeatedly asked the civil governor of this province for permission to return to their homes, and in every case refused or restrictions imposed making it impossible to comply with.

* * * * * * *

A few plantations are grinding cane. In every case they are heavily guarded by Spanish troops, and have paid insurgents for so doing. Was shown a letter from insurgent chief to owner of a large plantation, in which price demanded for grinding was 2,000 centones ($10,600 United States gold). It was paid. To make crop of sugar this season money, oxen, and laborers must be had.

* * * * * * *

I am, etc., A. C. BRICE,
United States Consul.

Mr. Brice to Mr. Day.

No. 99.] CONSULATE OF THE UNITED STATES,
Matanzas, January 18, 1898.

SIR: I have the honor to report the following concerning destitute American citizens, Matanzas province:

* * * * * * *

Up to Sunday, January 9, 1898, weekly rations of food have been regularly issued, also medicines for sick, and, although there has been more or less hardships and suffering for want of clothing, shelter, etc. (which we were not allowed to supply), none of our people have suffered for food or medicine.

* * * * * * *

In behalf of these people, I earnestly ask the Department that some rompt measures be taken to further relieve them. They are absoıtely helpless—no work, shut up in cities and towns like rats in a trap › starve. We have fifteen or eighteen families (American reconcen-:ados) who own property in the country, and were they allowed to go › their homes, could make a good living. All these have begged and leaded with authorities (under Blanco's order) to go, and in every case ɜfused.

Since the 24th of May, 1897, to December 26, 1897, seven months, we ave given food and medicines and relief to an average of 305 persons, .merican citizens, at a cost of $8,175.48 Spanish gold. This amount ɜceived from Havana on account of Cuban relief fund to date. We ɜquire a little over $800 (bills not rendered) to settle last two weeks' ıtion bills and three weeks' medicine.

* * * * * * *

I am, etc.,

A. C. BRICE,
United States Consul.

[Inclosure in No. 99.]

CUBAN DESTITUTION.

Circular letter dated January 8, 1898, from Department of State, received yesrday.

This intimates that help is to be extended by the United States to the starving ›ople in Cuba. The news of this relief has been known for the past two weeks ıd has extended all over the province. This consulate has been overwhelmed with ›ople of all classes asking to be remembered when this relief comes.

I submit a few facts illustrating the suffering in this province alone. There are Matanzas Province over 90,000 people who are in actual starving condition and quire food, clothing, and medicines.

In addition to above, there are thousands of families (of the better classes, formerly ɜll to do) who to-day are living on one meal a day, and that very scant. They ›ve sold or pawned furniture, jewelry, clothing, etc., to eke out an existence until l is gone, or nearly so. Too proud to beg, they suffer in silence, and many die of arvation. The daughter of a former governor of this province was seen begging on e streets (incognito) of this city. Many of these people call on me privately at y residence asking and praying for God's sake to be remembered when this relief mes from the United States. One has to be here, know and mingle with these ›ople, to fully realize the terrible destitution and misery existing in Cuba. It is to › hoped that this relief from the United States will come quickly, for hundreds are :ing daily in this province of starvation. Conditions are dreadful, and no relief forded by Spanish authorities.

I would advise that food and supplies for this province be sent direct to Matanıs, thus avoiding the railroad freight, drayage, etc. Supplies can be landed direct › warehouses (by lighters), which have been offered free of charge. The figures ıd facts I have stated indicate the large quantities of food and supplies required › give even temporary relief; also some cash will be required to handle and disibute supplies.

I am, etc.,

A. C. BRICE,
United States Consul.

MATANZAS, CUBA, *January 18, 1898.*

Mr. Brice to Mr. Day.

[o. 100.]

CONSULATE OF THE UNITED STATES,
Matanzas, February 8, 1898.

SIR: I have the honor to inform the Department that U. S. cruiser *lontgomery* arrived in this port February 3, 1898, 10.34 a. m., leaving ›r Santiago de Cuba on February 5 at 6 p. m.

The usual courtesies were extended this consulate; also friendly visits

from civil and military governors and other officials of province and city. Return visits made the following day, and their reception by commander and officers on board was a royal one and greatly appreciated.

The arrival of cruiser *Montgomery*, although a surprise, was hailed with delight by all classes, and sure to be productive of good results.

The striking feature was: Poor people thought vessel was bringing them food from the United States; their disappointment was great.

I am, etc.,

A. C. BRICE,
United States Consul.

Mr. Hyatt to Mr. Day.

No. 405.] CONSULATE OF THE UNITED STATES,
Santiago de Cuba, November 15, 1897.

SIR: Since my return to Cuba I have availed myself of every opportunity possible to learn what, if any, changes have taken place during my absence.

At first I was disposed to believe that the insurgents were weakening and that the autonomists were coming to the front. Time and further investigation, however, has failed to confirm that view of the case.

* * *

The change of policy, as expressed by Captain-General Blanco, is doubtless modifying the feeling of resentment which formerly prevailed and, should the near future prove discouraging to the insurgents, would doubtless smooth the way to pacification. * * *

The promised revocation of the order of reconcentration is yet unfulfilled and beggars are very numerous. "Me estoy muriendo de hambre" (I am starving) is their most frequent salutation. Generally their appearance confirms their words.

* * * * * * *

What ought the United States Government do, is a question much discussed, and the answer is usually what the person desires, and sentiment, not reason, makes reply. Among property holders, whether Americans or citizens of other nationalities, there is but one sentiment. "Hands off," or such active intervention as will quickly terminate the struggle. They greatly deprecate constant agitation, which makes the governing classes enemies to American interests and brings no corresponding advantages. For your information I inclose a military order and a translation of the same, issued by the insurgent general, Calixto Garcea. General Garcea's command extends over more than half of the island, including the provinces of Porto Principe and Santiago, the portions supposed to be in most active rebellion.

Another order is issued by the same authority permitting owners of coffee estates to gather as much as they may need for family use, but none for market.

The present insurgent capital is at San Augustin Aguarris, between Holgiun and Tunio, 135 miles from Santiago.

The local papers, which publish only what has been submitted to censorial examination, admit several engagements of late on those parts of the island heretofore reported as pacified.

* * * * * * *

I am, etc.,

PULASKI F. HYATT,
United States Consul.

[Inclosure in No. 405.]

MILITARY DEPARTMENT OF THE EAST,
GENERAL HEADQUARTERS,
Baire, November 6, 1897. (Third of Independence.)

the commanding generals of the first, second, and third army corps of eastern
:
ly informed through the press that the Spanish Government is offering autonomy
the intention by these means to subdue the revolution, or at least to bring about
rbances in our ranks and weaken our cause, this general headquarters reminds
that the spirit and letter of our constitution does not admit with Spain any
y whatever that is not based upon the absolute independence of Cuba. In
dance with this I will be inexorable, submitting to a summary trial, and will
der as traitors all civil or military officers of whatever rank receives messages,
nissions, or has any intercourse with the enemy, as the supreme government of
epublic is the only one authorized, and listen to any overtures that may be
, and even the government will only listen to proposals acknowledging the
ute independence of Cuba by the Spanish Government. All persons who come
in our lines commissioned by the enemy with proposals to submit to Spain will
ied and punished as spies.
order to avoid any ignorance being professed on the subject, you will circulate
communication among your subordinates, posting this order during eight
at your headquarters and have it read in the presence of the troops.
untry and liberty.

CALIXTO GARCIA,
Commander in Chief of the Department of the East.

ire is a small village lying about 54 miles from the city of Santiago.

Mr. Hyatt to Mr. Day.

407.] CONSULATE OF THE UNITED STATES,
Santiago de Cuba, November 20, 1897.

R: For the benefit of the Department of State I send the inclosed
of civil officers of the insurgent government of Cuba, elected and
alled at Yaya, in the province of Porto Principe October 20.
here is rumor of renewed activity on the part of the rebels of east-
Cuba, commanded by Gen. Calixto Gracea, and the shipment of all
lable Spanish soldiers to Manzanillo corroborates the report.
he Spanish residents of the island are becoming very outspoken in
r of closing the war and annexation to the United States. There
numerous inquiries among them of how they can become citizens of
Government. There are also quite a number of Spanish soldiers
ing the same inquiry. The business Spaniards here declare that
are tired of doing business at a loss, and that peace and prosperity
only come by annexation. Many are greatly disappointed that the
ted States consul can not make American citizens of them at once.

With highest, etc.,

PULASKI F. HYATT,
United States Consul.

[Inclosure with No. 407.]

t of insurgent officials elected and installed at Yaya Porte Principe, Cuba,
ber 20, 1897:
esident, Bartolo Maso.
e-president, Domingo Mendez, Capote.
cretary of war, Jose B. Alerman.
cretary of the treasury, Earnisto Font Stearling.
cretary of foreign affairs, Andres Moreno de la Torre.
cretary of the interior, Manuel R. Silva.
neral-in-chief, Maximo Gomez.
utenant-general, Calixto Gracea.

with favor by the most ardent friends of Spain.

* * * * * * *

There is, however, a feeling of relief and safety since the chan
the captain-generalship.

Very respectfully, PULASKI F. HYA

Mr. Hyatt to Mr. Day.

No. 410.] CONSULATE OF THE UNITED STATES,
Santiago de Cuba, December 5, 18

SIR: The situation in this part of Cuba is not destitute of acti
nevertheless, it seems to be one of expectancy, both sides posing
waiting to see what will happen in the United States.

There is a more secure feeling since the arrival of Governor-Ge
Blanco, otherwise no perceptable change. The reconcentration
is relaxed, but not removed; but many people have reached a
where it is a matter of entire indifference to them whether it is rem
or not, for they have lost all interest in the problem of existence.

A census of the island taken to-day, as compared with one t
three years ago, I feel confident would show that two-thirds o
residents are missing; and the Spanish army would make no b
showing.

The rainy season is practically over, and cooler weather is appa
the thermometer ranging from 70° to 88° F. through the twenty
hours, in the shade.

His Excellency Enrique Capriles, a former governor of this prov
has returned to this post of duty. His former record is a suffi
guaranty of an honorable administration.

* * * * * *

Mr. Rigney, an American sugar planter near Manzanillo, was

ıong them has materially decreased and their appearance has greatly ıproved.

* * * * * * *

Very respectfully, PULASKI F. HYATT,
United States Consul.

Mr. Hyatt to Mr. Day.

ı. 413.] CONSULATE OF THE UNITED STATES,
Santiago de Cuba, December 14, 1897.

SIR: Since my last dispatch on the situation in Cuba several military gagements of more or less importance have occurred and the insur- ıts are claiming to have had the best in the fight; but until an gagement shall take place of sufficient importance to have a con- lling influence, I can safely leave the press to report on such matters. take it to be a matter of far greater importance that I shall watch trend of public opinion and its effects on the political situation, for ıs far battles have not been the most important factors in the Cuban ›blem.

Up to the present we have only garbled accounts as to the contents the President's message, so it is too early to say what its effects will I shall, however, watch such results with much concern, as all rties have looked forward to it with deepest solicitation.

The order of reconcentration is now practically wiped out, and, so far the Spanish Government is concerned, men go about nearly as they ase. The insurgents and their sympathizers will unquestionably take vantage of the revocation to get from the towns and cities what ›y need, and otherwise strengthen their cause.

The effect on agricultural pursuits will be disappointing, because the ›at majority of those who would or should take up the work joined insurgent forces when compelled to leave their homes, and the por- n which came within the lines of reconcentration are women, children, and sickly people, most of whom seem to have little interest in the ›blem of life. * * * There is no one to take these people back the fields and utilize their remaining strength. Their houses are ıtroyed, their fields are overgrown with weeds, they have no seed to ınt, and if they had, they can not live sixty or eighty days until the p matures, which, when grown, would more than likely be taken by or the other of the contending parties.

Many of those who are attached to their families have them within insurgent lines.

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Finally, I give it as my opinion, an opinion that I am sure is not sed in favor of Cuba, that Spain will be compelled to prosecute a more vigorous war than has yet been done if she conquers peace Cuba. I think I speak advisedly when I say that in this end of the ınd at least there are many thousand square miles where the foot of Spanish soldier has never trod. Within this zone the insurgents ve their families, carol their horses and cattle and raise their crops. ey reach the ontside world by methods of their own.

Why Spain with a large body of as obedient and brave soldiers as ır shouldered a gun has not penetrated these grounds and scattered

SIR: I respectfully report that sickness and the death rate on island is appalling. Statistics make a grievous showing, but com short of the truth.

The principal disease is known by various names. Calentura, b dol fever, la grippe, etc., is thought by physicians to be brought o insufficient food. I know some that are attacked that have pl These, however, usually make a good recovery, while the others d make very slow recovery.

The disease is endemic rather than of a zymotic or contageous acter. From 30 to 40 per cent of the people are afflicted with it a present time.

Yellow fever continues in all parts of the island, and smallpo some places, but are insignificant as compared with the prevailing ease. Out of a total of 16,000 soldiers recently sent to Manza nearly 5,000 are in hospitals or quartered on the people. I have learned whether it has attacked the insurgents or not; presumably for Cubans elsewhere are not exempt, as in yellow fever.

An extremely strong effort is being made to increase the streng the autonomist party. The governor sends for men of supposed i ence and asks them to join the party and work to make it succe He argues that it is a patriotic duty in which all good citizens sh aid.

* * * * * * *

As yet planters are all at sea as to whether they will grind ca not. It is no secret that they will have to make terms with the i gents if they do, and I understand that an agreement by which 50 per bag, or about 15 cents per 100, will be paid for Cuban hand Planters say this will leave them no profit, but leave their planta in better order for future operations.

The three Rivery brothers, American citizens and owners of c cocoa, and orange groves, are about to return to their places. are absolutely penniless, and say they would have surely starved for the food issued from this consulate. I shall continue to su them with food, and issue a month's rations of such food as rice, b

Steamers coming to this port mostly give out soup once a day to the iting throngs.

Fresh meat in our markets sells from 50 cents to $1 a pound.

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Very respectfully,

PULASKI F. HYATT,
United States Consul.

Mr. Hyatt to Mr. Day.

418.] CONSULATE OF THE UNITED STATES,
Santiago de Cuba, January 1, 1898.

IR: I have the honor to say that, from a military standpoint, there othing new worthy of report, except the mobilizatien of the Span- forces to the number of 18,000 in and near Manzanillo, 6,000 of ch are in hospital.

.utonomy has been pushed with great vigor, almost or quite to the ıt of forcing men to join the party, when they could not be hired by inor office.

/hen here, a few days since General Pando sent for a Mr. Lora and l: "You have two active and influential brothers in the rebel army. ı must go at once to these brothers and say, Come in and join the ɔnomist party and they will be provided for by me."

[r. Lora replied: "General, I ran away from my home to escape join- the insurgents; my brothers chose to join them. I will obey your ımand if you desire to sacrifice my life. My brothers would order shot on the spot if I approached them with your proposition." ıeral Pando withdrew his command.

ınrique Capeiles, who was governor of this province some four years , returned to the same position about a month since. He is highly ɔected by all classes, and has worked with great energy to build up autonomist party. He resigned to-day and took a solemn oath that vould never again set foot on Cuban soil. He declared himself both ɔouraged and disgusted.

he problem of sugar making in this province is most discouraging. limatic fevers still hold about one-third of the people in bed. The th rate for the week in this city is 109. I deem myself fortunate in ıg a physician when called upon to fight life's battles amid such ɔundings.

Very respectfully,

PULASKI F. HYATT,
United States Consul.

Mr. Hyatt to Mr. Day.

420.] CONSULATE OF THE UNITED STATES,
Santiago de Cuba, January 8, 1898.

IR: I have the honor very respectfully to say that in my opinion most important question of the Cuban problem to-day is, "Will people of Cuba accept autonomy as a basis of settlement?"

have taken great pains to inform myself on this question and to ınate as far as possible the bias which comes with the sources of information.

here for several days, but as yet has not taken charge of the offic

In many cases where Cubans are anticipating the acceptance office they have sent to the field to ask permission from insu officers.

It will be seen that Cubans are moving very slow in accepting a omy.

* * * * * *

It is given out that sometime in the month of February there w an election held for the purpose of electing sixty members of the C assembly and eighteen members of the council of administr while seventeen additional ones are to be appointed by the Gov General. The lines are supposed to be drawn for or against auto Cuban leaders declare they will neither make nominations nor go the polls; so, if they adhere to their purpose, it will be no te strength, and no recognition of the result will be taken by the n the field.

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Numerous dead bodies at the cemetery are carried over from d day because the sexton is unable to bury them with his present of assistants as fast as they come.

Very respectfully,

PULASKI F. HYATT
United States Con

Mr. Hyatt to Mr. Day.

No. 421.] CONSULATE OF THE UNITED STATES,
Santiago de Cuba, January 12, 18

SIR: I deem it a duty to lay before the honorable Departm State the situation here as affecting American interests, and to in herewith an order issued by command of Gen. Maximo Gomez, a translation of the same forbidding the grinding of the sugar cr

by the action of the insurgents, who refuse to allow them to return to their sugar, coffee, and other estates. The Pompo Manganese mines, owned by Americans, would at the present time be a very profitable investment if allowed to operate, are also being held up by the same power.

The three Revery brothers, who I informed you recently I was about to assist in returning to their coffee and fruit estates, got there only to find they could not go to work until permission was obtained from the insurgent commander, which permission seems doubtful, I myself, as I understand my duty, being inhibited from rendering them any assistance at this point.

These, with several sugar estates within my consular district, are held up and becoming more worthless than before.

* * * * * * *

It is beyond the power of my pen to describe the situation in eastern Cuba. Squalidity, starvation, sickness, and death meets one in all places. Beggars throng our doors and stop us on the streets. The dead in large numbers remain over from day to day in the cemeteries unburied.

* * * * * * *

Very respectfully, PULASKI F. HYATT,
United States Consul.

[Inclosure in No. 421.]

There is a seal that reads: Republic of Cuba, War No. 43, book 3, folio 150.

The council of the Government in session on the 29th day of last month adopted the following resolution:

Considering that the working of the sugar estates favor the plans of our enemies, as shown by the marked interest in their last winter campaign, thus injuring the steady headway of the revolution.

It has been ordered by our Government as a general political measure of war, which to-day is more than ever imposed upon us, and in accordance with article 22, paragraph 6, of the constitution to absolutely prohibit the realization of the sugar crop of 1897–98, that this be communicated to the general-in-chief, with the object that he will dictate the opportune orders for the exact compliance of this resolution, and that it should be published for general knowledge, making known that violators will suffer the punishment prescribed by our laws.

What I transcribe to you for your knowledge and exact compliance.

I am, with high consideration,
Country and liberty,
Palmarito, December 2, 1897.

JOSE B. ALEMAN, *Secretary of War.*

To Gen. CALIXTO GARCIA.

I hereby certify that the above resolution authorized by the secretary of war, José B. Aleman, and directed to Gen. Calixto Garcia, is an exact copy of original on file in the archives of the chief of the military department of Orient.

Baire, December 28,1897.

Lieut. Col. EDUARDO SALAZAR, *Auditor.*

Mr. Hyatt to Mr. Day.

No. 424.] CONSULATE OF THE UNITED STATES,
Santiago de Cuba, January 22, 1897.

SIR: I have the honor to report that Colonel Masso of the insurgent forces, whose home is in this city, has, at a point west of here, given himself up to the Spanish forces, with one hundred and ten officers and men under his command.

Citizens of Santiago say that he did the same thing in the forme rebellion.

But the military situation is completely overshadowed in importan by the starving, struggling mass, whose cry is "Bread, or I perish."

This consulate is besieged to an extent that blocks the entran and greatly retards business. They have heard that the people of t United States are giving funds for their relief, and have not t patience to wait. I could name three Americans here who contrib monthly over three hundred dollars toward feeding the poor, but it as nothing compared to the people's necessities.

Men, women, and children, homeless and almost naked, roam t streets by day, begging of everyone they meet, or door they pass, a sleeping at night anywhere they can find a place to lie down.

If the present death rate is continued, there would not be a soul l in the city at the end of five years.

For the masses it is speedy help or sure death.

Very repectfully,

PULASKI F. HYATT,
United States Consul

Mr. Hyatt to Mr. Day.

No. 427.] CONSULATE OF THE UNITED STATES,
Santiago de Cuba, January 31, 189

SIR: I desire to inform the honorable Department of State that C tain-General Blanco arrived at this port on Friday night, the 2 instant, but remained on shipboard until the next morning.

The consular corps called soon after his arrival. Most of Gen Blanco's remarks were directed to the French and American consul

* * * * * * *

Colonel Marsh, of General Blanco's staff, called upon and dined w me the same evening. He speaks fairly good English, and is a gen man of rare social qualities. On leaving he said, "I shall be at times most happy to use whatever influence I may have with Gen Blanco in securing a favorable resolution of any matters that you r desire to present to him."

I told him I was prepared to take advantage of his offer at once there had just arrived at the custom-house in this place a quantit quinine which the collector of customs said he could not deliver d free without instructions from Havana. The colonel promised to the matter at once before the Captain-General, and the quinin released, and, as I understand, it is ordered that all future shipme are to be promptly delivered to me, if any shall come.

On Sunday morning the regular passenger train on the Saban and Maroto Railroad, when 5 miles out of Santiago, was blown up dynamite bombs, exploded by electric wires; two cars were shive in atoms. Five passengers were killed outright and twenty-two ba wounded, some of whom have since died. It is thought by some t the insurgents believed that Captain-General Blanco was on the tr by others that they merely wanted to notify the general that they w around and attending to business.

I am, etc.,

PULASKI F. HYATT,
United States Consul

Mr. Hyatt to Mr. Day.

No. 428.] CONSULATE OF THE UNITED STATES,
Santiago de Cuba, February 1, 1898.

SIR: The military conditions here upon the surface are not materially changed, but to one who watches the signs of the times and knows the character of the men who act the drama the situation is not without portent.

The era of good feeling is passing away, while bitter words and cruel acts are again coming to the front. Those engaged in works of mercy are denounced for keeping alive a tribe that ought to be dead. But it can not be said there is no excuse for harsh judgment. The stoppage of all agricultural pursuits and the blowing up of cars containing innocent people can not be justified even under the guise of war. Extremists of both sides seem able to dominate the sentiments of their respective parties, while a deep feeling of personal hatred pervades their breasts.

General Blanco's mild and humane policy meets with but a feeble response from his own followers, while the insurgents laugh at the old man who throws sods and grass instead of stones.

Autonomy is already a dead issue, while buying insurgent leaders thus far is not a marked success, the insurgent generals having already imprisoned several officers suspected of venality.

Colonel Marsh, of General Blanco's staff, said recently—

> Spain fails to comprehend that Cuba has, as it were, two mothers—a political one, which is Spain; a commercial one, which is the United States; and the political mother fails to see that the commercial mother has any rights, while the commercial mother can not shake off her responsibility, for God has made them next-door neighbors.

I do not believe that the Western Continent has ever witnessed death by starvation equal to that which now exists in eastern Cuba.

Very respectfully, etc.,

PULASKI F. HYATT,
United States Consul.

Mr. Hyatt to Mr. Day.

No. 432.] CONSULATE OF THE UNITED STATES,
Santiago de Cuba, February 15, 1898.

SIR: In the matter of distribution of American relief, I have to report that up to the present time nothing but medicines have reached us; but I understand that food is on the way.

As soon as I learned that quinine was coming I at once addressed a polite note to his excellency informing him of the fact and requesting him to suggest through what channels it would be best to make distribution.

The governor answered very politely, but said, as they had their own physicians who were looking after the poor he did not see the necessity, but should the emergency arise would be very glad to avail himself of the generous offer.

Fortunately, a well organized corps of the first ladies of the city were doing the best they could with the means at hand to help the unfortunates, and to nearly every family in this part of Cuba quinine was as acceptable as gold. Twenty of these ladies called on me for quinine

and were at once spreading it among the needy sick. I also sent a quantity to the archbishop, and begged him to accept and use it in such a way as in his judgment he thought best.

The physicians of the city quickly joined, and in less than twenty-four hours the quinine was in every part of the city doing its work.

I also shipped portions to Baracoa on the north coast, to Guanatanamo and Manzanillo on the south coast, to the interior towns of Holguin, Canez, San Luis, Dos Caminos, Cristo, Moron, Dos Bocas, San Vicente, Noniato, and Cuabitas, as also to the towns at Daigueri and Juragua, belonging to two large American iron-mining companies.

A fair quantity was sent to the eleemosynary institutions of this city and other places, so that within a week the whole hundred thousand pills were doing duty and just as they were gone another batch arrived.

The governor, seeing the good work being done, sent me a polite note, saying he had appointed two gentlemen to assist me and that he himself was personally at my service. I then appointed two gentlemen, Dr. Arze and Mr. Octaviano Duany, to act in conjunction with the governor's committee.

These gentlemen will under my direction look after the business matters and will take charge of the distribution of food.

The ladies will go from house to house and issue tickets according to their best judgment, and at certain times these orders will be filled under the direction of the gentlemen committee.

With the free use of quinine the death rate of the city fell 20 per cent the first week.

The quinine and other medicines sent have proved to be so potent and certain in their action, that the work of American chemists has received a decided boom and by all parties the action has been pronounced marvelous.

The doctors have heretofore found that in order to break a fever they had to prescribe from 60 to 100 grains of quinine each day. One-fifth of that amount of American quinine does the work better.

Very respectfully,

PULASKI F. HYATT,
United States Consul.

Mr. Hyatt to Mr. Day.

No. 434.] CONSULATE OF THE UNITED STATES,
Santiago de Cuba, February 16, 1898.

SIR: Wounded Spanish soldiers, about 200 in number, have been brought to the hospital of this city within the last three days. A surgeon who has dressed the wounds of a Spanish captain tells the story this morning as follows:

> Our command, about 7,000 in number, had been to Holquin and were returning, when at a point near Aguacate, without any notice or knowledge of the presence of the enemy in force, a galling fire opened on us, and, as we could not tell from where it came or see the enemy to return the fire, we were ordered to drop flat on the ground. From this position we returned the fire as best we could for a time on an unseen enemy, who finally withdrew.

The captain admitted a loss of 300 in killed and wounded on the Spanish side, and says they have no knowledge of the loss inflicted on the insurgents.

Sixteen hundred new troops from Spain arrived at this port last night, among them quite a number of young doctors just graduated.

Very respectfully,

PULASKI F. HYATT,
United States Consul.

Mr. Hyatt to Mr. Day.

No. 437.] CONSULATE OF THE UNITED STATES,
Santiago de Cuba, February 26, 1898.

SIR: I have the honor to herewith inclose for your information a copy of a letter sent yesterday by me to the New York Central Cuban Relief Committee, showing the results of four days' work in distributing rations to the starving poor.

Rations are issued in a court attached to the consulate, the people being admitted by the police through a carriage driveway.

As I write the street is blocked by the hungry throng for nearly a square above and below the entrance.

I have requested the police to admit the most delicate and feeble subjects first, as many of them are unable to stand very long in such a crowd.

I shall if possible get a photographic view of the scene and forward it to the President through your honorable Department.

I am, etc.,

PULASKI F. HYATT,
United States Consul.

Since writing this dispatch (No. 437) I have been informed that the ladies, relief committee have estimated that in this city alone the number who need help is at least 18,000.

HYATT, *Consul.*

[Inclosure in No. 437.]

UNITED STATES CONSULATE,
Santiago de Cuba, February 25, 1898.

NEW YORK CENTRAL RELIEF COMMITTEE.

GENTLEMEN: I desire to make a brief report of the first four days' work in distributing the 101 cases of evaporated cream, 65 cases condensed milk, 100 bags of rice, 104 cases of codfish, 6 boxes of bacon, 208 bags flour, 43 barrels of beans, pills, drugs, etc., which I received in due time by steamship *Niagara*.

As stated in a previous communication, a committee of 30 of the best ladies of this place divided the city into 15 districts, with two ladies to each district. These issue rations tickets according to the number of needy persons in each house.

These tickets are honored under the direction of a committee of gentlemen and myself, and a liberal week's rations are issued to each.

To prevent imposition we are obliged to refuse all who do not come with tickets from the ladies. The first day, rations were issued to 379; second day, 579; third day, 1,083; fourth day, 1,027; total, 3,068.

Each ration being for seven days, which makes a total of 21,482 for one day.

As near as I can judge only about one-half of the people who need help have yet received their first rations, and the codfish and beans will give out before we get around the first time.

Have given moderate quantities to the eleemosynary institutions of the city, and sent some to the mining and other towns near by.

We are trying to make both food and medicine do the most good possible.

It takes six or eight policemen to keep the crowds in order.

I am obliged to spend some money for labor, cartage, transportation, cable incidentals, etc.

There are numerous people badly ruptured and in a distressed condition. I am skilled in handling trusses, but I hardly think it advisable to send trusses, as each case needs a stock to select from.

I would not advise sending any more medicine except quinine for the present.

Everything sent has been of a superior quality. The Highland brand of condensed cream and flour are specially fine.

The medicines have had almost miraculous effects. Should you make further shipments, keep beans, rice, and codfish in the foreground, but everything comes in play.

Smallpox has again broken out, and I have requested Surgeon-General Wyman to send to you for me a quantity of vaccine virus. Should it come to hand I will thank you to furnish me with a moderate quantity.

I am, gentlemen, with highest consideration, your most obedient servant,

PULASKI F. HYATT,
United States Consul.

Mr. Hyatt to Mr. Day.

No. 439.] CONSULATE OF THE UNITED STATES,
Santiago de Cuba, March 24, 1898.

SIR:

* * * * * * *

Three sugar estates owned or managed by the house of Brooks & Co. are making sugar on a small scale, but have little faith in their ability to go ahead. These plantations are located near Guantanamo.

Property holders, without distinction of nationality, and with few exceptions, strongly desire annexation, having but little hope of a stable government under either of the contending forces, and they view with regret the indifference, nay, repugnance, of the American people to such a union, and still hope that a combination of circumstances will yet bring it about; but such a move would not be popular among the masses.

On Sunday last an election was held in this city to elect officers to hold an election on the 27th instant. No one seemed to know anything about it until it was over, and the autonomists won the election. A member of that party told me that "we met quietly and done our voting." There is no evidence that the people in general intend to take any part in the coming election. Circulars are now out urging the people to turn out and sustain the government, to the end that peace and prosperity may speedily come.

Very respectfully,

PULASKI F. HYATT,
United States Consul.

Mr. Jova to Mr. Day.

No. 261.] CONSULATE OF THE UNITED STATES,
Sagua la Grande, November 11, 1897.

SIR: It may not be improper that I give the Department my impressions of the status of affairs here concerning the new policy promised by Spain to this island.

By the attitude openly demonstrated against autonomy from the two only existing parties that have to decide its results, the Cuban separatists, including the armed men in the field and their supporters in the towns, and the Spanish conservatives, with followers in Cuba and Spain,

the former refusing anything but independence, the latter encouraging its members to strongly protest, not solely against autonomy, but even "reforms," which they have rebuked as contrary to their constitution, I can not help to foresee that far from improving the actual condition of things it will make it more and more critical.

I have left aside without consideration a new factor on the political arena, "annexation," not being able to calculate its magnitude on account of the legal prohibition of that doctrine resulting in the secret endeavors of the adherents, but it is well seen that it is growing stronger every day, principally among the Spaniards. The autonomist part to-day in this district does not exist. In very rare exceptions one partisan may be found loyal to that platform; more so now, in view of Captain-General Weyler's work. It may be said that it is only nominal.

The Reformists have divided themselves so much that its members are to be found in any of the other parties. They are ready to adopt the flag of the more favorable side, turning out thus a very weak association. Spain has to depend on these two last nominal and feeble corporations for the implantation of its new course of action. Taking all these facts into appreciation, it is hard to see in what way is Spain going to establish this new system. It will always be a parasite without stable foundation, without basis, singly maintained by a very infirm, insignificant auxiliary.

In the meantime the reconcentrados, the majority innocent beings, who have had, and even now have no notion of the cause of this revolution, who had no more aspiration than to till their little farms, continue perishing. It is difficult, it may be said almost impossible, to be able to describe the extension and intensity of such tremendous suffering, of such iniquitous, unjust, and sinful imposition, to annihilate thousands of women and children. If this Godless combination should be accurately represented it would seem an exaggeration induced by stirred fellow-feeling. With sensibility in the heart moving among them, the increasing crowd of famished beggars, one can scarcely do more than commiserate the undeserved misfortune. To express, to delineate the afflictions, the anguishes witnessed at every step, would require much to write, and no lavish of colors could approach the reality to fiction. No history in the world, ancient or modern, can be compared an instant to this frightful, dreadful suffering. Perhaps civilization has not seen the like of it.

In conclusion, I beg to be permitted to state that, in my humble judgment, the efforts toward the enforcement of reforms or autonomy will prove altogether futile; and, of course, in consequence of this failure the few reconcentrados that have survived will not be allowed to go freely to their devastated farms, prolonging thus this unbearable situation.

I have, etc,

JOHN F. JOVA,
Vice-Consul.

Mr. Barker to Mr. Day.

No. 264.] CONSULATE OF THE UNITED STATES,
Sagua la Grande, November 20, 1897.

SIR: I have the honor to submit the following: While General Blanco has made known his purpose to relieve the concentrated people, by allowing them to go out of the towns, it may not be improper that

I give the Department reasons why this permission will not give the relief claimed by the authorities.

While Article I grants permission to this starving class to return to the country, Article III abrogates this very article in exacting that to avail themselves of the privilege the places to which they go must be garrisoned. This condition alone will preclude over one-half of these poor unfortunates, for their homes are in ruin, and the sugar estates able to maintain a guard can care for but a small percentage of the whole.

* * * * * * *

The guerrillas have already started their merciless warfare, having within the past week killed two "presentados" who had in good faith surrendered and gone to work on the American-owned estate "Victoria," repeating the act upon three insurgents who had surrendered to the local guerrillas of Sagua.

I will not question the good intention of those now in power; yet it is a self-evident fact that the authorities are utterly helpless to extend any relief to those who have thus far survived the pangs of hunger. Without instant pecuniary assistance * * * all efforts to relieve the starving populace must fall stillborn. So far as relates to this section of the island, the claim made by the Captain-General through a published letter to the Spanish minister in Washington that "extensive zones of cultivation have been organized, daily rations are provided by the State, work is furnished," etc., is not borne out by my observation.

* * * * * * *

As to grinding the present crop, I have interviewed most of the largest planters in this consular district, who stated that unless assured of immunity from the insurgent chief—Gomez—they would not jeopardize their property by attempting to grind.

It is an unquestioned fact that the military are powerless to give this necessary protection.

I am, etc., WALTER B. BARKER,
Consul.

Mr. Barker to Mr. Day.

No. 266.] CONSULATE OF THE UNITED STATES,
Sagua la Grande, November 25, 1897.

SIR: With reference to the distress and deaths in this island, I beg to submit the following relative to this—Santa Clara—province.

As has been my custom for the past five months, I have just made the monthly trip of investigation in this consular district, embracing a large part of the territory of the province. Appended is the official mortality list of each of the judicial districts comprising the province known as "Cinco Villas" (five towns) from January 1 to November 15, 1897, inclusive, viz:

Santa Clara	27,900	Sancti Espiritus	5,482
Sagua	16,583	Trinidad	4,946
Cienfuegos	14,263		
Remedios	11,415	Total	80,589

Add to this 25 per cent for the number of which no record has been kept. * * * I deem a conservative estimate would make the grand total 100,736 deaths.

In truth, after talking with both military and judicial officers, I regard this rather under than above the actual deaths for the period stated.

Undoubtedly one-half the concentrated people have died; and to-day Spanish soldiers are companion victims to the surviving noncombatants.

The inclosed slip (inclosure No. 1), showing the number of deaths, official, in the small municipal district of San Juan de la Yeras, will give some idea of the rapid increase from month to month, as will also the clippings (inclosure No. 2), cut from the local papers, show that the authorities no longer conceal these facts, as was done under the retired Captain-General. This appalling death roll is mute, yet convincing, proof of the terrible destruction of life under the main policy pursued in attempting to subjugate the island. The heavens, it would appear, weep for despoiled, distressed Cuba, for during the present month the fall of rain has been almost phenomenal. I have to reiterate, the authorities, however great the desire to do so, are utterly helpless to ameliorate the dire distress that must continue to increase. * * *

Relative to furnishing protection to the mills to grind, how is it possible in view of the fact that the safeguard extended planters in making the previous crop enabled them to grind less than one third of the usual yield, while the military force available to-day is not half in numbers as at that time.

With me the conviction is firmly rooted that within sixty days 90 per cent of the populace will reach a state of craving hunger, without outside aid, nor do I feel that I am speaking chimerically when I include the rank and file of the Spanish army.

The true status, as viewed at present, will bear out this opinion. The suffering among the troops, as well as the reconcentrados, simply beggars portrayal, while discontent ripens daily.

I am, etc.,

WALTER B. BARKER,
Consul.

[Inclosure 1 in No. 266.]

Number of deaths each month from January 1 to November 15, 1897, in the municipal district of San Juan de las Lleras.

[Reported officially.]

January	17	August	366
February	18	September	377
March	17	October	417
April	55	November—to 15th	275
May	117		
June	265	Total	2,267
July	343		

[Enclosure 2 in No. 266.—Translation.]

VARIOUS NEWS.

During the month of October last 886 deaths occurred in Santa Clara. There were 44 births only.

HORROR.

El Universo, a daily constitutional paper, which is published in Santa Clara, says: In the month of October last 886 persons died at Santa Clara.

This is the natural consequence of one of the many humanitary proceedings of Weyler—the "concentration" without food. And this is said by El Universo, the Union constitutional daily paper, etc., etc. Horror!

Mr. Barker to Mr. Day.

No. 270.] CONSULATE OF THE UNITED STATES,
Sagua la Grande, December 13, 1897.

SIR: Confident of the desire of the Department to keep in touch with affairs under the new régime, I beg to submit the following:

In order either to qualify or confirm my No. 264, of the 20th instant, wherein I stated the claim made by the authorities that the people were cultivating the soil, rations issued daily to the needy, and protection given to the mills so as to grind the present crop was not in accordance with my observations, I have within the past few days visited five of the principal railroad towns in this consular district—viz, Santa Clara, Cruces, Esperanza, Jicotea, and Santo Domingo. The destitution is simply too harrowing to recite and must become intensified each day. The death rate for last month shows an increase of about 25 per cent.

In these towns I got my information from the mayors of each. From them I learned that while an issue of food, running from three to five days, had been made, beginning on the 28th ultimo, consisting of 3 ounces bacon or jerked beef and 6 ounces rice for adults, with half this allowance for children under 14 years, the pittance given was sufficient only for one-fourth to one-tenth of the starving. No further relief has been given up to date. On the contrary, the mayors of Santa Clara, Cruces, and Santo Domingo are authority for stating the Captain-General had ordered that after the 8th instant any issue of food to the "concentrados" be discontinued. I inclose herewith a clipping from a local paper of Santa Clara confirming this. I have also read it in more than one other Spanish journal.

The mayor of Santa Clara stated to me that the Captain-General a week since directed him to call on the commissary of the army for 5,000 rations for relief purposes, which he said was sufficient to feed the suffering people but for one day. This officer's answer was he could not do so, as all Government supplies on hand would be required to feed the army. The mayor stated, also, that in presenting this order to the military commander he was ordered by him under no circumstances to give food to anyone having relatives in the insurrection, which he informed me would exclude 75 per cent of the destitute. I know that in Sagua and other points orders for food have been given on the commissary departments of the army, but invariably refused, as being needed for the soldiers. I reiterate, however sincere be the authorities to provide for the large number of "concentrados" who dare not return to the country, the fact that they are utterly powerless to do so can not be disguised.

All efforts so far to obtain relief by popular subscription have met with signal failure. The Cubans are too poverty-stricken, while the Spaniards, who own the wealth, will contribute nothing.

In my recent trip I found that the Spanish soldiers are not only suffering for necessary food, but I was often appealed to by these pitiable creatures for medicine. One has only to look upon them to be assured of the needs complained of.

In view of the foregoing facts, known to me from personal investigation, I desire to renew the suggestion made to the Department in a previous dispatch, that the dire destitution and distress of * * * the people * * * appeals for immediate assistance to a charitable, Christian people, with which I sincerely hope the Department may not deem ill-advised to acquaint the people of the United States, when such a response will be made as will bring succor to a starving populace.

* * * * * * *

It is proper that I inform the Department that, added to the universal destitution, the guerrillas continue to attack and kill the noncombatants. * * * As stated, the guerrilla chiefs Carreras, Olavarieta, and Lazo are, if possible, more active in their cruel warfare on "pacificos."

I am, etc.,

WALTER B. BARKER,
Consul.

[Inclosure 1 in No. 270.—Translation.—From La Patria, December 4, 1897, of Santa Clara.]

ENDING OF RATIONS.

An order has been received from His Excellency the Captain-General directing that from the 8th instant the issue of rations to reconcentrados will be discontinued.

[Inclosure 2 in No. 270.—From Diario de la Marina, December 13, 1897.]

News from the insurrection by our special reporters.

[From Manzanillo, December 9.]

General Pando, from what may be gleaned by his first steps in the district, intends to begin an active campaign.

The task that this worthy general undertakes is very hard, as he finds himself in a part of the country where during two years they have done nothing but protect supply trains, giving the enemy time to perfectly organize themselves, a condition they possess, get together ammunition, and establish great plantations, where they want nothing.

Bear in mind that in saying this I do not try to blame the action of various division generals who have worked; enough have they achieved to hold on, without means of any kind and with forces devoured almost entirely by exhaustion and feebleness.

Another of the great obstacles that the general will find opposed is the absence of strategical places for provisioning the troops, because Yara, Zazzal, Cuentas, Claras, and others equally necessary now were destroyed.

Be it known that the destruction of these towns was effected by order of General Weyler.

[Translation.]

SANTIAGO DE CUBA, *December 8.*

Grinding.—The sugar estates Union and Santa Clara, the only ones that can work this crop, do not show yet any indications that they shall prepare for work. Both are deprived of oxen, it being very difficult to acquire them now in this neighborhood.

Meat.—Yesterday this eatable was selling at 50 cents silver per pound—a short one.

AURELIO.

Mr. Barker to Mr. Day.

No. 271.] CONSULATE OF THE UNITED STATES,
Sagua la Grande, December 15, 1897.

SIR: Thinking it may interest the Department, I have the honor to transmit herewith clippings from a leading Spanish journal published in Havana, * * * calling attention to the inability of the mills to grind in the Province of Santiago de Cuba, which is one of the obstacles to grinding in this (Santa Clara) province, were the planters able to pay tribute required by the insurgents.

The grinding season being at hand without preparations having been made dissipates all hope of a beginning.

Not to grind the present crop, small as it must be, will bring distress far greater than can be imagined.

I am, etc., WALTER B. BARKER,
Consul.

[Confidential.]

Mr. Barker to Mr. Day.

CONSULATE OF THE UNITED STATES,
Sagua la Grande, December 28, 1897.

SIR: I ask, very respectfully, to submit the following for your consideration:

Since the advent of the new government in this island I have endeavored to keep the Department informed of its workings in this consular district, and province as well.

Thus far every material fact reported has been verified. The suffering and destitution among the concentrados * * * is fearful, and must continue to grow worse.

How could the situation be otherwise, since the island is producing absolutely nothing, save some growing cane, and at the same time completely exhausted of all food. Relief alone can be obtained from the outer world in the way of charitable contributions.

This—Santa Clara—province is capable this season of producing, perhaps, two-thirds of whatever cane might be made in the entire island.

To grind this cane without interruption would be the means of saving the lives of thousands who, without this or outside aid within the next thirty to fifty days, must die of actual hunger. Over a month since the planters were officially advised of Spain's inability to provide protection in order to operate their mills. This leaves the sugar growers entirely in the hands of the Cubans in revolt, as to whether they will be allowed to grind without hindrance or fear of total destruction of their property. I know that strict orders have been given to subordinate commanders under no circumstances must mills be permitted to grind, under penalty of violation of the order destruction of property.

* * * * * * *

Without contributions of food and medicine from the outer world, and at once, a sacrifice of lives will ensue, the responsibility for which no Christian people can face.

I am, etc., WALTER B. BARKER,
Consul.

Mr. Barker to Mr. Day.

No. 273.] CONSULATE OF THE UNITED STATES,
Sagua la Grande, January 8, 1898.

SIR: I have the honor to transmit herewith, for conformation, copy of my telegram of even date sent the Department through our honorable consul-general at Havana, giving number of paupers in this consular district and province.

Prompt relief in the way of medicines as well as food will save many lives of this unfortunate class. While clothing, as stated, is needful, food and medicines are essential to save life.

Voluntary letters just received from the mayors of four of the principal towns of this immediate zone show not only the necessity for instant succor, but evince an earnest desire on the part of these recently installed officials to render aid in distributing whatever relief the charitable people of the United States may send this suffering people, not forgetting, as I shall not, the many Spanish soldiers whose every appearance is indicative of destitution.

This consular district—due to the fact that nearly thirty towns are embraced in it—will require more or less expenditure of money in lieu of food; yet I am assured of gratuitous transportation for supplies by the Sagua Railroad.

Within a few days I hope to have an official list from the mayors of the number of destitute in their respective municipal districts to forward to the Department.

I am, etc., WALTER B. BARKER,
Consul.

[Inclosure 1 in No. 273.—Telegram.]

Mr. Barker to Mr. Day.

SAGUA, *December 8, 1897.*

States that food, medicine, and clothing are required by more than 50,000 persons in his consular district, and that a reliable estimate of the number of starving in the Sagua province is 100,000. Advises the immediate need of relief by supplies through Consul-General Lee at Havana, or directly by the Munson Line. Says that some money will be needed, and that municipal authorities will aid in distributing supplies sent.

BARKER, *Consul.*

[Inclosure 2 in No. 273.]

Mr. Barker to Mr. Lee.

SAGUA, *December 8, 1897.*

DEAR SIR: I hand you herewith a telegram which I beg you will send from your office—by cable—in cipher if you deem best.

I need not tell you that the situation demands immediate action and relief.

I do not transmit this message for the reason I have no cipher "code." A copy of this telegram, with reasons for sending you to be transmitted, will follow in a dispatch to the Department.

Yours, truly, WALTER B. BARKER,
Consul.

NOTE.—Should the Department not regard it ill-advised, and will telegraph me authority to so act, I can, by wiring message to personal friends in New Orleans, Mobile, Memphis, Chattanooga, Atlanta, and Charleston, obtain needed contributions much more promptly.

BARKER, *Consul.*

Mr. Barker to Judge Day.

No. 278.] CONSULATE OF THE UNITED STATES,
Sagua la Grande, January 15, 1898.

SIR: I beg to submit the following: In this consular district a reign of terror and anarchy prevail which the authorities, be they so disposed, are utterly powerless to control or in any measure subdue.

Aside from the suffering and desperation caused by the unparalleled destitution, I regard the situation as rapidly assuming a critical stage;

and to add that, as stated repeatedly heretofore, in no way have the authorities departed, in fact, from the policy pursued by the late (but not lamented) General Weyler. Spanish troops as well as the guerrillas, under the cruel chiefs Carreras, Olavarrieta, and Lazo, continue to despoil the country and drench it with the blood of noncombatants. Although the "bando" of the Captain-General provides that laborers may return to estates having a garrison, last week a number belonging on the "Sta Ana," located within a league of Sagua, and owned by Mr. George Thorndike, of Newport, R. I., were driven off after returning, and refused permit as a protection by the military commander, Mayor Lomo, one of the trusted officers under the Weyler régime.

I am, etc.,

WALTER B. BARKER.

Mr. Barker to Judge Day.

[Confidential.]

CONSULATE OF THE UNITED STATES,
Sagua la Grande, January 10, 1898.

SIR: Pardon the presumption, if presumption it be, in me in offering the following suggestions for the consideration of the Department:

When Spain will admit defeat no mortal, in my humble judgment, dare predict. That her plan of settlement—autonomy—is a failure, and with this failure passes from under her dominion the island, is not to be questioned.

Pending this admission on her part, thousands of human beings, guiltless of bringing on or having any part in the insurrection, are dying for want of sustenance. This condition must continue to increase.

The United States in taking action relative to Cuba—which seems inevitable—desires to avoid a clash with Spain. Then let Congress alter our citizenship laws by amending the statute relative to the declaration required of persons becoming citizens by naturalization so that the subject or citizens of any government at present residing in Cuba may go before any United States consul in that island and make declaration of intention of becoming a citizen of the United States, which shall entitle them to recognition as citizens until the expiration of two years, when they shall be required to reside in the United States until five years shall have elapsed before being granted naturalization papers.

With such a privilege, I am confident 90 per cent of the resident Spaniards—the hitherto dominant party and taxpayers—will avail themselves of this opportunity (as they would have it) of rebuking the mother country for attempting to foist upon them any changes in the existing laws of the island. Such a step would cause the home subjects as well as the Government to acquiesce, without disturbance, in the loss of the island. To this, if none other, there may be constitutional objections.

Again, assuming that Spain may now accept the "good offices" of the United States with a view to negotiating a peace with her rebellious subjects, let an armistice for sixty days be suggested, in which time terms of settlement to be discussed between the authorities and the insurgents, the United States being the umpire.

Pending negotiations, all Spanish troops to be quartered and held in the larger fortified coast towns, in order that the "concentrados" may return to the country to arrange to subsist themselves; for, be it under-

stood, that the proposed relief to be sent from the United States, as well as Government aid now being given our citizens, must be continued or leave the people to starve, so long as there is an armed Spanish soldier in the country, since these people, for fear of being murdered, dare not go to their country homes.

I have the honor, etc.,

WALTER B. BARKER,
Consul.

Mr. Barker to Mr. Day.

No. 284.] CONSULATE OF THE UNITED STATES,
Sagua la Grande, January 27, 1898.

SIR: I beg to inform the Department that smallpox, referred to in my No. 279 of the 18th instant, has increased to an alarming extent. The number of cases and mortality among the "reconcentrados" is unprecedented throughout this consular district.

I am, etc.,

WALTER B. BARKER,
Consul.

Mr. Barker to Mr. Day.

No. 286.] CONSULATE OF THE UNITED STATES,
Sagua la Grande, January 31, 1898.

SIR: Relative to citizens of the United States residing in this consular district, I have the honor to say to the Department, after three months, the new administration's progress and repudiation concerning the abuses in vogue under the former régime reveal the following facts:

Of those herded in the garrisoned towns, none have been allowed to return to their landed estates. Some few who did venture to go to their farms under a pledge of protection from the military commander of the province—to whom I will not impute bad faith—were driven off by guerrillas. * * * At my suggestion several families returned to the American owned "Central Santa Anna," the owner having been forced to abandon the property in order to prevent further spoliation of the mill machinery. Although a Government guard is stationed on the place, they (former tenants) were ordered to leave.

Application was made to the military commander * * * for authority to return unmolested, which was refused.

Over two months since, two of our citizens notified me they had discovered in possession of the local guerrillas ten or twelve head of their horses, seized by said guerrillas. I addressed the military commander of Sagua, * * * asking, upon proof of ownership, their stock to be restored. Nothing has been done; while these American citizens—both in affluence at the breaking out of the rebellion—are to-day dependent on charity.

One sugar mill is running, not without interruption, with chances of making one-fourth of a crop. Another—just started up—was attacked yesterday by a band of insurgents, killing 14 and wounding 5 of the guerrillas paid by the estate to protect the operatives. Seven laborers were killed, the insurgents leaving two of their dead.

An adjoining estate, the property of the British consul, was also

attacked, the growing cane burned. This precludes further attempts to grind, as men can not be induced to work while the insurgents roam at will over the country.

I am, etc.,

WALTER B. BARKER,
Consul.

Mr. Barker to Mr. Day.

No. 288.] CONSULATE OF THE UNITED STATES,
Sagua la Grande, February 17, 1898.

SIR: I beg to submit the following:

It is proper that I inform the Department that the ravage of small-pox has reached a point where the physicians, few in number, without proper means of treating, as well as no nurses, can not cope with it. I have cabled our dispatch agent in New York for an additional supply of virus.

I was informed by the mayor of this city only yesterday that he was just in receipt of a communication from the government of the province stating no funds to feed the starving were obtainable. In reply to my query why he did not send a number of them to the country, he stated that the military commander refused to grant this permission.

I am, etc.,

WALTER B. BARKER,
Consul.

Mr. Barker to Mr. Day.

No. 294.] CONSULATE OF THE UNITED STATES,
Sagua la Grande, March 12, 1898.

SIR: With reference to the distribution to and requirement for the concentrados in my consular district, I beg to submit the following for the information of the Department:

From the 15th of last month, through cash donations made to this consulate, direct, through personal appeal, I cared for 1,200 persons. By the 1st instant these contributions increased so as to enable the committee to increase the relief list to 2,000. This has been maintained until now; but as the *Fern*, with 35 tons, should arrive to-morrow, the Sagua relief can be continued.

About a week since I received the first shipment of supplies, about twenty tons being sent from Havana under direction of the Red Cross branch in that city. All this I distributed among ten of the twenty-two towns I had managed to investigate, using none for Sagua; there being five others not yet looked into out of the twenty-seven cities and towns in my zone. I believe that with the assistance of a very able local committee, that I have this relief reduced to a kind of system so as to avoid as little abuse as possible, and at the same time care for the most deserving.

For instance, about sixty days ago, the mayors of these towns furnished, by request, this office with the number they claimed as actually destitute in their several municipal districts, which footed up over 50,000 persons. Estimating a decrease from death of 10,000, would leave, say 40,000.

From the investigation so far made, I estimate if provision can be made to care for 25,000, whatever may be left will manage to survive.

Upon this estimate I beg to say that to keep this number alive will require 80 tons per month.

With the supplies reported in transit we can carry them through until the 12th of the coming month (April).

While, as stated in a very recent dispatch to the Department, the military have thrown every conceivable obstacle in the way of carrying out this humane work, I have, when convinced of their sincerity, acted in conjunction with the civil authorities.

Of the 5,000 utterly destitute in this city, the mayor, by popular subscription, has made an effort to issue a scant ration of rice and beans to about one-third of this number. Yesterday he called to say that he had a telegram from the acting Spanish minister in Washington, suggesting that he offer to aid me in the distribution of the supplies being sent from the United States; that he had no funds with which to do anything.

Being a good active man, I gladly accepted the offer of his services.

It is with pleasure that I say to the Department that Senor Leonardo Chia, "administrador" of the Sagua, as also the "administradores" of the Santa Clara and Cienfuegos railroads, have not only transported free the supplies for the reconcentrados, but have used extra effort to have them reach destination in due time.

I am, etc., WALTER B. BARKER,
Consul.

Mr. Barker to Mr. Day.

No. 295.] CONSULATE OF THE UNITED STATES,
Sagua la Grande, March 14, 1898.

SIR: The inclosed letter from Mr. Valle,* of Sancti Espiritus, whom I have every reason to believe will not misrepresent the case, together with the fact that in other places I find I have underestimated the number in my jurisdiction in need of relief. It is therefore that I beg to increase the amount required, as stated in my No. 294, of the 12th instant, from 80 to 100 tons per month.

I am, etc., WALTER B. BARKER,
Consul.

[Telegram.]

Mr. Barker to Mr. Day.

SAGUA LA GRANDE, *March 24, 1898.*

DAY, *Washington:*

Closer investigation disclose larger number destitute than estimates sent. Fifty tons needful now. Distress far greater than my reports show.

BARKER, *Consul.*

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* Letter referred to implores medicines and provisions.

Mr. Barker to Mr. Day.

No. 297.] CONSULATE OF THE UNITED STATES,
Sagua La Grande, March 21, 1898. (Received March 30.)

SIR: I have the honor to say that since forwarding my No. 294 of the 12th instant, wherein I gave the Department approximately the amount of food required for my zone per month, I find many outlying—interior—villages, of which I had no account, neglected and in great want. To this very class, located in the interior towns, I have given special attention, but it has been impossible to care for all immediately. For instance, the relief committee to whom supplies were sent in Santa Clara, seat of government of the province, inform me to-day that in a small town near there are 300 persons in pressing need. To-day I wired Mr. Louis Klopsch, of the Christian Herald and Central Cuban Relief Committee, who is now in Havana, that 20 tons additional required till 1st proximo, and to know if he could supply this. As yet no reply has been received. A very large proportion of these poor creatures being actually ill, other medicine than quinine is required, as also medicinal wines and nourishing food for them.

I beg to inclose herewith a list of towns to which I have and am sending supplies. There are perhaps six to eight more requiring relief.

In this, Sagua la Grande, the number on the relief list exceeds 4,000. The authorities have given up, turning over to my committee their "kitchen," which is being run by them, as is also the "dispensary" for sick children.

The committee inform me since beginning the relief the death rate has fallen from 25 to 30 as low as 4 to 7 per day.

* * * * * * *

I am, sir, your obedient servant,

WALTER B. BARKER,
Consul.

[Inclosure No. 297.]

List of cities and towns being supplied from the consul at Sagua la Grande.

Sagua la Grande.	Sitiecito.	Santo.
Santa Clara.	Rodrigo.	Camajuani.
Santi Spiritus.	Rancho Veloz.	Caibarien.
San Juan de los Remedios.	Carahatas.	Yaguajay.
Esperanza.	Vueltas.	Seibabo.
Cruces.	Vega Alta.	Quemado de Guines.
Santo Domingo.	Vega de Palma.	Caguaguas.
Encrucijada.	Mata.	Ysabela.
Calabazar.	Quinta.	Victoria.
Cifuentes.	Viana.	San Diego del Valle.
Sitio Grande.	Jicotea.	Lajas.

Mr. Barker to Mr. Day.

No. 299.] CONSULATE OF UNITED STATES,
Sagua la Grande, March 24, 1898.

SIR: I visited seat of government of this province, Santa Clara, where I learned, not alone from trustworthy persons sent out by me for the purpose, but also the civil governor, that the number of persons in

actual want exceeds any estimate I have sent the Department. The distress is simply heartrending. Whole families without clothing to hide nakedness, sleeping on the bare ground, without bedding of any kind, without food, save to such as we have been able to reach with provisions sent by our noble people; and the most distressing feature is that fully 50 per cent are ill, without medical attention or medicine.

If $5,000 could be telegraphed to our honorable consul-general at Havana, blankets, cots, and medicine could be purchased here in the several towns adjacent, and save thousands who must die if to await their being sent from the United States. I have found the civil governor willing to lend every aid in his power; but he admits he can do nothing but assist with his civil officers in expediting relief sent by the United States. The military obstruct in every way possible.

* * * The Department will bear in mind the towns I am trying to reach with relief will number over forty.

I am, etc., WALTER B. BARKER,
Consul.

[Gazette of Madrid, Friday, November 26, 1897.]

OFFICIAL.—PRESIDENCY OF THE COUNCIL OF MINISTERS.

STATEMENT.

MADAM: At the time when an autonomic constitution is given to the islands of Cuba and Porto Rico, which intrusts to their own initiative the management and government of their local interests, it is of paramount importance to strengthen constitutional unity, as the staunchest basis on which the integrity of our territory r sts.

This aim of all the liberal parties, recognized in principle by the decree of April 2, 1881, has, however, failed of accomplishment in the form to which the people of the Antilles are entitled. They frequently complain of and deplore irritating inequalities which are of themselves sufficient to hamper, if not totally to preclude, the enjoyment of constitutional liberty. Indeed, these liberties, as they are disclosed in the fundamental code, consist of declarations of rights and guarantees that are subsequently sanctioned and developed in a series of organic laws, complements of the constitution, as provided in its fourteenth article, which devolves on special laws "the rules which must secure to the Spaniards reciprocal respect for the rights herein granted, and at the same time determine the civil responsibility and the penalty to which officers of all classes who infringe the rights set forth in Title I must be held liable.

It follows that if, through arbitrary provisions for which no remedy exists, through penalties imposed in the orders of governors-general, or through the omissions of laws of procedure, the citizen may be restrained, molested, or even deported to distant parts of the territory, he finds it impossible to exercise his right to speak, think, and write, or to enjoy freedom of teaching and religious toleration, or to avail himself of the right of meeting and associating.

And yet the whole foundation of modern law rests on the regular and orderly exercise of these rights; therefore, wherever it is limited equality before the law ceases and with it constitutional unity. Then arise these perverted feelings which are carried to the extent of attacking the integrity of the territory. The geographical bond with all its attractions and allurements can not cause that other aspiration to be forgotten, which, while it grows out of the same human instinct, is deeper and more essential.

It is therefore good policy, at all events it is an act of strict justice, to do all that is in the power of the Government, to the end that the Constitution be at once extended in its entirety to the territory of the Antilles, that every vestige of inequality may be removed, and that our legislation be thoroughly revised, so that there can be no Spaniard who, through confusion or error, may lack the protection of the law.

This is certainly the intent of article 89 of the constitution. The provision by which it leaves to the discretion of the governments the time and manner in which the laws are to be applied to the islands of Cuba and Puerto Rico does more than grant the authority; it imposes on the Government the duty to publish this decree at the very

time when it submits to your majesty the other measure which is about to give to our brethren in the Antilles—the right to govern themselves. The full value of that measure would not be appreciated if suspicion and distrust, closely followed by arbitrariness, should prevail in the regions of the Central Power.

Inasmuch as we, in the peninsula, have come to the belief that all executive functions can be discharged within the constitution of the State and under the laws enacted for its execution; inasmuch as instances of resort to force, against which, however, the law of public order is deemed adequate, are not lacking here, we should show ourselves to be illogical, and, consequently, lose the authority requisite for forceful government, if we did not proclaim, as the foremost and most significant part of the transformation effected in our colonial régime, that constitutional unity which is the bond that unites all Spaniards, and under which the free local government of those valued territories will restore confidence in the mother country, and thus will unmistakable evidence be given of the sincerity with which she seeks to render her sovereignty beloved.

Resting on the foregoing reasons, the Government has the honor to submit the appended draft of a decree to your majesty's approval.

At the royal feet of your majesty.

PRAXEDES MATEO SAGASTA.

MADRID, *November 25, 1897.*

ROYAL DECREE.

In accordance with the opinion of my council of ministers and by virtue of the authority conferred on my Government by article 89 of the constitution, in the name of My August Son, King Alfonso XIII, and as Queen Regent of the Kingdom, I hereby decree as follows:

ARTICLE 1. The Spaniards residing in the Antilles shall enjoy, on equal terms with the residents of the peninsula, the rights granted in Title I of the constitution of the Monarchy and the guarantees whereby their exercise is secured by the laws of the Kingdom.

To this end, and conformably to article 89 of the constitution, the laws by which its provisions are supplemented, and especially that of criminal prosecution, that of compulsory expropriation, that of public instruction, that of the press, and of meeting and association, and the code of military justice, shall go into full effect in the islands of Cuba and Puerto Rico, so that article 14 of the constitution may be executed in its entirety.

ART. 2. In time of war the law of public order shall be enforced in the Antilles with the limitation and in the manner prescribed in article 17 of the constitution.

ART. 3. The ministry of the colonies, after hearing the council of state, shall revise the legislation of the Antilles and the proclamations published by the Governors-General since the promulgation of the constitution, and shall thereafter publish the results of such revision, to the end that henceforth there may be neither on the part of the executive, nor on that of the judiciary, any possibility, through error or neglect, either of citing or enforcing provisions that are at variance with the letter or spirit of the constitution of the Spanish Monarchy.

MARIA CRISTINA.

The president of the council of ministers:

PRAXEDES MATEO SAGASTA.

Done at the Palace, November 25, 1897.

STATEMENT.

MADAM: The complement of the decree that places the Spaniards on an equal footing as regards the use and enjoyment of their constitutional rights and the indispensable preparation for the organization of local government in the Antilles is the enforcement in those territories of the law of electoral suffrage that is in force in the Peninsula.

To effect this the Government might have confined itself to the reproduction, pure and simple, of that law; but the difficulty of so doing will be apparent when it is remembered that in order to give the greatest security to the electoral right the Cortes of the Kingdom, proceeding with forethought and in their desire to avoid impairing, through seemingly unimportant reglementary provisions, rights that have much value in public life, sought to include in the law even the last and most minute regulations that govern its execution.

For this purpose there are in it two kinds of provisions—one that comprises the

definition of the right and the guarantee of the casting of the vote, the other that establishes the conditions, so to speak, preparatory to those purposes. Hence the necessity of discriminating between these two parts of the law.

The first undoubtedly possesses a character that yields in importance to constitutional provisions only, and therefore it must, like these, protect itself from the changes and modifications to which legislation is frequently exposed.

It merely behooves the Government to say that since we have considered it good and proper for the Peninsula, it is an obligation that can not be evaded, to extend it and apply it to our colonies.

The same is not the case, however, as regards the mode of procedure.

So far as it possesses that character in the exercise of suffrage, in the taking of the census, in the manner of casting the vote, in the preliminaries of the election, in the organization of the colleges, even in the qualifications of the electors, there are such different points of view, according to the traditions, the geography, and the component parts of a people, that it would be more than illogical, nay, would lead to a result diametrically opposed to that which is had in view, to shape the electoral procedure of the Antilles in the peninsular mold, especially when the creation of self-government and of parliamentary organisms that are to be the expression of the will of the people demand that the regulation of what relates to the exercise and security of the electoral right be intrusted to them.

In view of these weighty considerations, the Government has thought that after separating all that refers to the definition and recognition of the right of suffrage from what might be called the constitution of the islands of Cuba and Puerto Rico, in order that, in any case, it may be modified by a law, it ought to intrust all the regulations, which will be many in number and complicated in their development, to the insular Parliament, feeling certain that no one possesses to a greater extent the conditions necessary for success in adapting them to the habits and character of the population.

The flexibility thus acquired by the electoral procedure will undoubtedly enable it to identify itself with the conditions of those inhabitants, and to render the exercise of suffrage practical and fruitful, as no one can have more interest in its success than those who are to be governed by it.

On the basis of these considerations, the Government has the honor to submit to the approval of your majesty the accompanying draft of a decree.

At your majesty's royal feet.

PRAXEDES MATEO SAGASTA.

MADRID, *November 25, 1897.*

ROYAL DECREE.

In accordance with the opinion of my council of ministers, and in virtue of the power conferred upon my Government by article 89 of the constitution of the monarchy, in the name of my august son, King Alfonso XIII, and as Queen Regent of the Kingdom, I decree as follows:

ARTICLE I. The electoral law of June 26, 1890, shall be promulgated and observed in the islands of Cuba and Porto Rico, with the modifications that have been introduced in the text that follows this decree, with a view to its adaptation to the conditions of those territories.

ART. II. The regulations and other necessary provisions for the execution of the present decree, which the Government shall before the Cortes, shall be prepared by the ministry of the colonies.

MARIA CRISTINA.

The president of the council of ministers:

PRAXEDES MATEO SAGASTA.

Done at the Palace this 25th day of November, 1897.

Adaptation of the Electoral Law of June 26, 1890, to the islands of Cuba and Porto Rico.

TITLE I.—GENERAL PROVISIONS FOR ELECTIONS.

CHAPTER I.—*Of the right to vote.*

ARTICLE 1. All male Spaniards over 25 years of age that shall be in the full enjoyment of their civil rights, and inhabitants of a municipal district in which they shall have resided at least two years, shall be voters in the islands of Cuba and Porto Rico.

Soldiers and sailors serving in the army or navy shall not be allowed to vote while so serving.

The same suspension is ordered as regards those serving under similar circumstances in other armed bodies depending on the State, province, or municipality.

ART. II. The following persons shall not be voters:

(1) Those who by an unappealable sentence have been condemned to perpetual deprivation of political rights and public offices, although they may have been pardoned, unless they have previously obtained personal rehabilitation by means of a law.

(2) Those who, by an unappealable sentence, have been condemned to imprisonment, unless they have obtained rehabilitation at least two years before their enrollment in the census.

(3) Those who, having been condemned to other penalties by an unappealable sentence, shall not furnish evidence that they have served out those penalties.

(4) Bankrupts, not rehabilitated according to law, and who do not furnish documentary evidence that they have met all their obligations.

(5) Debtors to public funds as second tax payers.

(6) Those who are inmates of charitable institutions, or who are administratively authorized, at their request, to ask for public charity.

CHAPTER II.—*Of the electoral census.*

ART. 3. In order to exercise the right of suffrage, it is necessary that the person be inscribed in the electoral census; that is to say, the register containing the names and the paternal and maternal surnames, where they exist, of the Spanish citizens who have a right to vote.

The census is permanent, and shall be amended only by the annual revision.

ART. 4. The taking, revision, custody, and inspection of the census shall be under the charge, in accordance with their respective powers, of the central board established by the law of June 26, 1890, concerning provincial boards and of municipal boards, which shall be styled the electoral census boards.

The provincial boards shall sit in the capitals of each province, and the municipal boards shall sit in each municipality. They shall all be of a permanent character.

The provincial boards shall be presided over by the judges of the superior court (audencia) of such province as may be designated by the president of the superior district court to which that audencia belongs; and the municipal boards (shall be presided over) by the judges of first instance, or, in their absence, by public officers selected for that purpose by the president of the superior court of the province.

The number of the members of the provincial boards shall be fifteen, and the presence of nine members shall be requisite for deliberation or for taking action.

The following persons shall be members of the provincial boards:

(1) The president and the vice-president of the deputation concerned.

(2) The senior ex-president of the same deputation residing in the province.

(3) Four taxpayers chosen by lot from among those paying the first assessment of the land tax, who are residents of the province.

(4) Four taxpayers chosen by lot from among those paying the first assessment of the industrial tax, who are residents of the province.

(5) Four residents of the province, furnishing proof by means of official documents, of their professional or academic character.

The substitutes for the taxpayers shall be eight persons residing in the province and paying the largest assessments of the land tax, and eight persons residing in the province and paying the largest assessments of the industrial tax, and the substitutes of the residents having official titles shall be persons possessing the same qualifications as are required of them. They shall all be chosen by lot.

The choice by lot of the taxpayers, professional men and their substitutes shall be made publicly before the superior court of each province by the presiding judge of that court.

The following persons shall be members of the municipal boards:

(1) The alcalde (mayor) and the syndic of the city council.

(2) The municipal judge and the municipal attorney.

(3) Ex-alcaldes residing in the municipal district.

(4) Four of the chief payers of the land tax, and four of the chief payers of the industrial tax, residing in the municipal district.

(5) Four residents of the municipal district, furnishing proof, by means of official documents, of their professional or academic character.

The taxpayers and professional men shall be chosen by lot by the president of the municipal board, at a public meeting, before the city council, in the manner prescribed for the provincial boards.

The substitutes shall be chosen at the same time and in the same manner.

The municipal boards shall not deliberate nor take any action unless at least twelve members are present.

The clerks of the superior courts shall be the secretaries of the provincial boards, and the clerks of the courts of first instance, or, in their absence, the clerks of the municipal courts, shall be the secretaries of the municipal boards.

The secretaries shall have neither a voice nor a vote, and shall be assisted by the employees of the respective secretariats.

The respective presidents shall convene the members and such substitutes as they may deem necessary for all the sessions the boards may hold. If, in spite of this, a sufficient number are not present, the session shall be held on the following day, after the substitutes residing in the capital have been summoned, in addition to the members present.

CHAPTER III.—*Of voting.*

ART. 5. In every electoral precinct there shall be a board charged with the supervision of the voting, consisting of a president and the supervisors (interventores) appointed by the census board and by the candidates who have a right to nominate them, and who make use of that right.

This census board shall be the provincial board in the case of elections of deputies to the Cortes and of representatives or provincial deputies to the Cortes, and of representatives, and the municipal board when an election of councilmen (concejales) is to be held.

ART. 6. In every summons for a general or partial election a single day shall be designated for the voting, which day shall always be Sunday.

The voting shall take place simultaneously in all the precincts on the day fixed, beginning punctually at 8 o'clock in the morning and continuing uninterruptedly until 4 o'clock in the afternoon, when it shall be declared finally closed, and the counting of the votes shall begin.

ART. 7. The voting shall be secret, by ballot, and shall be conducted in the manner prescribed by the regulations.

ART. 8. There shall in no case be an armed force at the door of the electoral college, nor shall any such force enter it, except in the case of disturbance of the public peace and upon the requisition of the President.

TITLE II.—SPECIAL PROVISIONS FOR THE ELECTIONS.

CHAPTER I.—*Of the election of senators.*

ART. 9. Spaniards possessing the qualifications required by article 22 of the constitution of the monarchy, are eligible to the office of senator, provided they are not included in any of the cases of disability or incompatibility fixed by law.

ART. 10. Elections of senators shall be held in accordance with the provisions of the laws of February 8, 1877, and of January —, 1879.

The senators, after they have been admitted by the senate, represent the nation individually and collectively.

CHAPTER II.—*Of the election of deputies to the Cortes.*

ART. 11. All male Spaniards of the secular order, not less than 25 years of age, in the enjoyment of all civil rights, are eligible to the office of deputy to the Cortes, provided they are not included in any of the cases of disability or incompatibility fixed by law.

ART. 12. The deputies to the Cortes shall be elected directly by the electors of the electoral districts, subject to this law and the regulations; but after they have been elected, and admitted by Congress, they represent the nation individually and collectively.

ART. 13. Those provisions of the electoral law of the peninsula of June 26, 1890, which relate specially to the election of deputies to the Cortes and the discharge of their duties, apply to the deputies to the Cortes from the islands of Cuba and Puerto Rico. Hence, the articles in question are inserted as an appendix to the present law, in the form in which they are to be observed in accordance with this law.

CHAPTER III.—*Of the election of counselors of administration, representatives, provincial deputies, and councilmen.*

ART. 14. Those Spaniards may be counsellors of administration and representatives who possess the qualifications required for those offices by the constitution of the islands of Cuba and Porto Rico.

ART. 15. Spaniards having the qualifications required for deputies to the Cortes, and who are natives of the province, or who have resided four years consecutively in the province, may be provincial deputies.

ART. 16. Those electors may be elected members of ayuntamientos (councilmen) in municipal districts containing not more than 100 inhabitants, who, in addition to having resided at least four years in the municipality, pay a direct tax included in the first two-thirds of the local lists of persons paying a land tax, and an industrial and commercial subsidy, and in municipal districts containing less than 1,000 and more than 400 inhabitants, those paying taxes included in the first four-fifths of the said lists. In municipal districts containing not more than 400 inhabitants all the electors shall be eligible.

All those paying a tax equal to the lowest tax required to be paid in each municipal district in order to be eligible under the preceding paragraph shall likewise be included in the number of eligibles.

Those residents who pay any assessment of tax and furnish proof by means of official documents of their professional or academic character shall likewise be eligible.

Those persons who furnish proof that they are subjected to a rebate (reduction) in the incomes which they derive from general, provincial, or municipal funds shall likewise be eligible, provided the amount of the rebate is included in the qualification (proporcion) previously fixed for eligibles in towns of 1,000 and 400 inhabitants, respectively.

The assessment (tax) shall be calculated by adding together the taxes paid by the taxpayers, in and outside of the town, as a direct tax and for municipal taxes (charges). In calculating the taxes of the electors and the eligibles the following property shall be considered as theirs: In the case of husbands, the property of their wives, so long as the conjugal relationship exists: in the case of fathers, such property of their children as they administer legally; in the case of sons, their own property, the usufruct of which they do not enjoy for any reason.

ART. 17. Those persons who are included in any of the cases of disability or incompatibility established by the respective laws can not be elected to any of the offices mentioned in the three preceding articles.

ART. 18. Those persons designated in article 25 of the electoral law of the peninsula relating to senators shall be electors of counselors of administration. The provisions of chapter 4 of that law shall be applied to the drawing up of the lists of electors and to the election of the counselors of administration in the manner prescribed by the regulations.

ART. 19. In the districts in which one representative, one provincial deputy, or one councilman (concejal) is to be elected no elector can legally give his vote to more than one person; when more than one, up to four, are to be elected, each elector shall have the right to vote for one less than the number of those who are to be elected in his own district; for two less (than the number of those who are to be elected) if more than four are to be elected, and for three less when more than eight are to be elected.

The other provisions relative to electoral procedure shall be such as are enacted in the respective organic laws and in the regulations.

TITLE III.—PENAL SANCTION.

CHAPTER I.—*Of offenses.*

ART. 20. Any forgery of documents relating to the provisions of this law, in any of the ways mentioned in article 310 of the penal code of Cuba and Porto Rico, shall constitute the crime of forgery in electorial matters, which shall be punished with the penalties provided in the said article, or in the following article, according to the status of the persons who are responsible.

Any intentional omission in the documents referred to in the preceding paragraph which may affect the result of the election shall constitute a similar offense, and shall be punished with the same penalties.

ART. 21. The courts shall, nevertheless, lessen the penalties one or two degrees, imposing them upon such person as they may think proper, according to the special circumstances of the case, the scandal or alarm that it has occasioned, and whenever there shall appear to be no connection with other offenses made punishable by the code.

ART. 22. For the purposes of this law, the census and authorized copies thereof, records, lists, certificates, and whatever may emanate from the person who is intrusted by law with the execution thereof, the object of which is to facilitate or insure the exercise of the electoral right or its result, or to guarantee the regularity of the procedure, shall be considered official documents.

ART. 23. The penalties of imprisonment and of a fine of from 500 to 5,000 pesetas, when the general provisions of the penal code do not fix a higher penalty, shall be

imposed upon public officers who, by failing to faithfully and strictly fulfill the obligations imposed by this law or by the provisions that may be adopted for its execution, are accessory to any of the following acts or omissions:

(1) To any failure to prepare with accuracy the lists of electors, whether preliminary or definitive, or to exhibit the same publicly during the proper time and in the proper place.

(2) To any alteration of the day, hour, or place in which any public business is to be done, or to the method of its designations leading to error.

(3) To any fraudulent manipulations in matters relating to the preparation of the census, the organization of electoral boards or colleges, the voting, the resolutions or ballotings, and the nomination of candidates.

(4) To the improper and inaccurate preparation of records or documents relating to the election, or to their not being signed in the proper manner by all who should do so, or to the proper dispositions not being made of electoral records or documents.

(5) To changing or altering in the ballot which the elector deposits in the exercise of his right, or to its being hidden from public view before it is deposited in the box.

(6) To the placing of impediment or difficulty in the way of electors, candidates, or notaries in the examination of the box before voting begins, and, when the ballots are examined, in the examination of the ballots taken from the box.

(7) To the preparation of an intentionally inaccurate list, such as to obscure the truth of the names of the voters at any election.

(8) To an inaccurate counting of votes in resolutions relative to the taking or rectification of the census, or to electoral matters, and also to the inaccurate reading of ballots.

(9) To violating the secrecy of the vote or of the election with a view to influencing its results.

(10) To the issuance of an unlawful proclamation against any person.

(11) To the making of untrue statements in the verbal declaration that is to be made on the occasion of an election, or to the prevention or impeding in any way of a proper knowledge of the truth concerning the election.

(12) To the postponement of any election without grave and sufficient cause.

ART. 24. Private individuals who are directly accessory to the commission of any of the offenses enumerated in the preceding article shall be punished with the penalty of imprisonment in its minimum degree when the penal code does not impose a more serious penalty on those who are guilty of commission or omission.

ART. 25. Every act, omission, or manifestation contrary to this law or to the general provisions adopted for its execution that is not included in the foregoing articles and whose object is to restrain or exert pressure upon electors, to induce them to exercise their right, or to relinquish it against their will, shall constitute the crime of coercing voters, and if there is no more serious penalty provided for it in the penal code, it shall be punished by a fine of from 125 to 2,500 pesetas.

ART. 26. The following persons shall also be considered as committing the crime of coercing voters, although the intention of restraining or exerting pressure upon the electors may not be obvious or apparent, and shall accordingly be subject to the penalties prescribed in the foregoing article:

(1) Civil, military, or eclesiastical authorities who advise or recommend voters to give or refuse their vote to a determinate person, and those who by the use of official means or agents, or the authorization of stamps, envelopes, seals, or notes that may have that character, recommend or advise against certain candidates.

(2) Public officers who promote or take part in the issue of Government records relating to denunciations, fines, arrears of accounts, lands, forests, granaries, or any other branch of the administration from the time when notice is given until the election is terminated.

(3) Officers, from the minister of the Crown down, who make appointments, removals, transfers, or suspensions of employees, agents, or clerks in any branch of the general, provincial, or municipal administration in the period between the giving of notice and the termination of the general balloting, when such acts are not based on legitimate reasons and affect in any way the precinct, college, district, judicial circuit, or province in which the election is held.

The cause of the removal, transfer, or suspension shall be accurately stated in the order, which shall be published in the Gazette of Madrid or in those of Havana or Puerto Rico, if it emanates from the central administration, and in the official bulletin of the respective province, if it emanates from the provincial or municipal administration. If these formalities are omitted it shall be considered as having been made without cause.

Royal decrees or orders relating to the civil governors of the provinces and to military officers shall be excepted from the above requirements. Removals, transfers, or suspensions decided upon, but of which the interested parties have not been notified before the electoral period, can not be made during said period, except in the exceptional cases and in the exceptional manner specified in this number.

ART. 27. The following persons shall be liable to the penalties provided in article 25, unless more serious ones are imposed by the penal code:

(1) Those who, by means of a promise, present, or remuneration, solicit, directly or indirectly, the vote of any elector in favor of or against any candidate.

(2) Those who incite voters to intoxication in order to obtain or secure their adhesion.

(3) Any person who votes twice or more times at an election, who takes another name in order to vote, or who votes when incapacitated or when his exercise of such right is suspended.

(4) Whoever knowingly consents, without a protest, when he might make one, to the casting of a vote in the cases mentioned in the foregoing number.

(5) Whoever prevents or delays the admission, attention to and decision concerning protests or complaints of voters, or who does not afford protection to those who make them.

(6) Whoever omits the announcements and notifications required by law, or who does not issue or cause to be issued, as speedily as the law directs, a certificate of election when application is made therefor.

(7) Whoever in any other, not provided for in this law, impedes or molests an elector in the exercise of his rights or the performance of his duty.

(8) Whoever maliciously raises or maintains, without good reason, doubts in egard to the identity of a person or the legality of his rights.

ART. 28. Public officers who cause a voter to leave his domicile or residence, or remain away from the same, even under pretext of the requirements of the public service, on the day of the election, or on a day in which he may be able and may desire to vote; or those who detain him, depriving him in similar case of his liberty, shall be liable, besides the penalties mentioned in the second paragraph of article 210 and in article 221 of the penal code, respectively, to the penalty of absolute, permanent disqualification.

ART. 29. Those who impede or hinder the free entrance and exit of the voters to and from the place in which they are to exercise their right, their approach to the voting tables, the presence of notaries, candidates, or electors in the places in which the election is to take place, in such a way as to render it impossible or difficult for them to perform their duties or exercise their right, and to verify the regularity of such elections, shall be liable, if they are public officers, to the penalty of imprisonment in its minimum degree and to a fine of 500 to 2,500 pesetas; and if they are private individuals, to the penalty of imprisonment in its minimum degree, unless other and more severe penalties are provided by the penal code, in which case the latter penalties shall be enforced.

ART. 30. Public officers who do not deliver or who maliciously delay the delivery of documents requested by special commissioners shall be punished as being guilty of the misdemeanor of serious disobedience to the authorities, without prejudice to the disciplinary responsibility which they incur at the same time.

ART. 31. Offenses provided for in the penal code, which are connected with matters relating to elections, shall be punished when the special provisions of the preceding articles are not applicable, with the penalties provided by the same code, and also with a fine of from 125 to 1,250 pesetas, in case a penalty of this class is not applicable to them.

ART. 32. The following penalties shall apply to all the offenses directly connected with the provisions of this law, whether they are provided by this or by another law: That of special disqualification, temporary or permanent, for the right of suffrage, if the guilty person is a public officer, and that of suspension from the same right if he is a private individual.

In the case of the repetition of an offense of this class the disqualification for public officers shall be absolute for all time, and for private individuals shall be absolute for a temporary period, in addition to the penalties provided.

CHAPTER II.—*Of infractions.*

ART. 33. Any failure to fulfill the obligations and formalities which this law or the provisions that shall be adopted for its execution impose upon all persons who take part in an official capacity in electoral proceedings shall be punished by a fine of from 25 to 1,000 pesetas, in case it does not constitute a crime.

Officers who, for any reason that can not be shown to be one rendering it absolutely impossible for them to do so, shall fail to perform any of the duties made incumbent upon them by this law or the regulations for its execution shall be required to pay the fine for which provision is made above, the imposition of which shall be ordered by the census board before which the duty should have been performed, due regard being had to the provisions of article 42.

The president of the provisional and municipal boards shall incur the same responsibility if, when they should receive one of the documents provided for in any of the

provisions of this law or of the regulations, they shall fail to order, on their own responsibility, that it be immediately collected by a special officer at the expense of the person whose duty it was to send it.

Those who in such cases shall fail to notify the central board that they have performed this duty shall be punished in like manner.

ART. 34. The following persons shall, moreover, be punished in the manner provided by the foregoing article:

(1) Those who are present at elections and who, in some way that does not constitute a crime, disturb order, or are lacking in proper respect.

(2) Those who, not having a right to enter the electoral colleges or the ballot boards, shall not leave the place at the first intimation from the president.

(3) Those who shall enter an electoral college, section, or board with arms, sticks, canes, or umbrellas, not being officers or not being physically impeded.

(4) Notaries who, being about to perform the duties of their office, do not give previous notice of their intention to the presiding officer of the function.

(5) Officers and individuals owing to whom the proper party fails to receive, within the time fixed and in the manner provided in the law, any communication, notice, instrument, or document that should be transmitted, without prejudice to the provisions of No. 4 of article 23.

(6) Members of the census boards and their substitutes who, without just cause, shall fail to attend the sessions to which they shall have been summoned without furnishing a proper excuse.

The following shall be deemed sufficient causes for not attending the sessions:

(1) Absence from the place at which the sessions are held.

(2) Important matters connected with the public service.

(3) Matters connected with one's personal health or the health of one's family, or private business that can not be deferred.

(4) Causes in virtue of which the president or members of the central board fail to attend the meeting of that board.

CHAPTER III.—*Provisions common to the two foregoing chapters.*

ART. 35. For the purposes of this law the following persons shall be considered as public officers: Those appointed by the Government, and those who, by virtue of their office, perform any duty connected with the elections, and also the president and members of the electoral census board, and the presidents and supervisors of the ballet bureaus and boards.

ART. 36. The ordinary courts shall alone be competent to take cognizance of electoral offenses, whatever may be the personal status of the guilty parties.

For the purposes of the provisions of this title it shall be understood that the offenses specially provided for in this law are electoral offenses, and also those which, being provided for in the penal code, relate to electoral matters properly so called.

ART. 37. When any offense shall be committed in the college or electoral board the president shall order the arrest of the presumptive criminals, and shall place them at the disposal of the judicial authorities.

A penal action growing out of offenses specially electoral shall be public and, may be brought for even two months after the expiration of the term of the office conferred by the election.

For the bringing of such action no deposit or security shall be required.

Judges and courts shall proceed according to the rules governing criminal trials.

ART. 38. No authorization shall be required to bring any officer to trial.

Cases in which, by a sentence from which there is no appeal, exemption shall be granted from responsibility for due obedience, shall be referred without delay to the court that is competent to take action against the person who gave the order which has been obeyed. The term referred to in the foregoing article shall remain in abeyance with respect to the magistrate or person obeyed from the time when proceedings were first taken until the day on which the competent court shall have received the unappealable sentence in which shall be declared the exemption from responsibility of the person who has obeyed.

When the magistrate who gave the order is a minister of the Crown, or when his responsibility shall have been shown in any manner, the court taking cognizance of the case shall refer it without delay to the Congress of Deputies, when the sentence in which exemption from responsibility is declared is unappealable or the antecedents resulting therefrom indicate the responsibility of the minister.

ART. 39. The general and special provisions of the penal code shall in all cases be applicable to the offenses provided for in this law, when said provisions have reference to offenses as having been consummated, frustrated, and tentative to participation therein by the various persons who are the objects of the proceeding, to the circumstances modifying the responsibility, and to the consequent graduation and enforcement of the penalties.

ART. 40. The court to which belongs the execution of unappealable decisions shall order their publication in the official bulletin of the province in which the offense shall have been committed, and shall send a copy of that newspaper to the central board.

ART. 41. No attention shall be paid by the minister of the colonies (nor shall any report thereon be made by the court or the council of state) to any application for pardon on account of electoral offenses, unless it shall previously appear that the petitioners have served at least one-half of the time for which they were sentenced to personal penalties, and have paid the full amount of the fines and costs. The authorities and members of corporations, whatever their status may be, who shall violate this provision by causing the petition for pardon to be laid before the King for decision, shall incur the responsibility provided in article 369 of the penal code.

The Government shall notify the central census board whenever a pardon is granted.

ART. 42. The punishment for infractions shall belong:

(1) To the presidents of the function or session in which they are committed.

(2) To the municipal or provincial census boards in which they are connected, respectively; with the acts of which said boards or their presidents are to take cognizance.

The municipal boards shall not, however, order any punishment in the case of superior boards, but if they understand that the provincial board has committed any infraction, they shall immediately notify the central board, that it may reach a proper decision in the matter.

When the judges fail to send to the census boards the documents which are necessary for the preparation or correction of the census, according to the regulations, said boards shall so inform the presiding judge of the proper superior court, that he may inflict the punishment, and shall send a report thereof to the central board.

(3) To the central board, the rest.

The imposition of fines shall take place in pursuance of a written decision in which the grounds therefor shall be stated. Those imposed in pursuance of the provisions of paragraph 1 of this article or by the municipal board may be appealed from before the provincial board within two days following the notification, which board shall confine itself to affirming or annulling the decision.

The rescissory decisions of the provincial board and those of that board in the exercise of its own powers may be appealed from within the same term to the central board, which may increase, diminish, and approve, or remit the fine within the limit of its powers.

ART. 43. Presidents of electoral colleges or of boards for counting votes, muncipal boards and the presidents thereof, shall not impose a fine exceeding 100 pesetas (francs).

Presidents of provincial boards, and those boards, may impose a fine to the amount of 500 pesetas.

The central board and its president may impose a fine to the amount of 1,000 pesetas.

ART. 44. The payment of these fines shall be made in special paper which the department of public finance shall issue for the purpose and shall deliver on account to the provincial deputations, collecting thereon a duty of 20 per cent of its value. The remainder of its value shall be paid into the proper provincial treasury.

If, six days after the decision shall have been pronounced, the fine shall not have been paid, compulsion shall be used for its collection.

In case the person fined is insolvent, he shall suffer imprisonment at the rate of one day for each 5 pesetas of the fine, but this term shall not exceed 10 days when the fine shall have been imposed by the municipal board, its president, or the president of the bureau; it shall not exceed 20 days if the fine shall have been imposed by the provincial board, its president, or by the boards for counting votes, and it shall not exceed 30 days if the fine shall have been imposed by the central board or its president.

TRANSIENT PROVISIONS.

First. Within the three days following the publication of this law in the gazettes of Havana and Puerto Rico, a board shall be formed in each one of the capitals of the island, which shall be called the insular board for the electoral census. It shall be composed of the Governor-General, who shall be its president; of the governmental divisions of the superior courts of Havana and Puerto Rico, respectively; of two members, chosen by the Governor-General from among the most influential residents, to represent in the board the political parties of the island, and of the secretary of the general government, the latter to have the right of discussion, but no vote, and he shall perform the duties of secretary. Moreover, the civil governor of Havana shall be a member of the insular board for the electoral census of the Island of Cuba.

The powers of these boards shall be:

(1) To inspect and direct all services connected with the preparation and preservation of the census.

(2) To preserve the printed copies of the final lists which shall have been taken from the provincial registers.

(3) To communicate, through the president, with all public authorities and officers.

(4) To receive and decide all complaints that are addressed to them.

(5) To exercise disciplinary jurisdiction over all persons taking part, officially, in electoral operations, imposing fines to the amount of 1,000 pesetas, which, the case arising, shall be collected by their order, by judges of first instance.

(6) To settle questions that may arise in connection with the execution of this law and its regulations, adapting the provisions of both to the condition of the island so as to secure independence and a genuine vote.

The insular board of Cuba shall, moreover, issue such orders as it may think proper, for the holding of elections in those districts in which the state of the insurrection shall not permit the taking of the electoral census in time, or to hold such elections according to the provisions of this law and the regulations for its execution. For this purpose each of the districts in question shall appoint delegates who, together with seven of the largest taxpayers on agricultural and manufacturing property, and seven capacities (?) shall proceed to hold the election, according to such instruction as may be communicated to them by the insular board.

Second. In execution of the provisions of article 4 of this law, before the 26th day of December next, the presiding judges of the superior courts shall appoint the magistrates who are to preside over the provincial electoral census boards, and the officers who are to preside over the municipal boards in those localities in which there are no judges of first instance.

Third. In order that the elections may be held as speedily as possible, and the new political and administrative officers may perform their functions in the islands of Cuba and Puerto Rico, the following shall be the mode of procedure:

On the 1st day of January, 1898, at 8 o'clock a. m., the president of the municipal electoral census board, having been appointed by the superior court of the province, shall proceed, in the hall of sessions of the municipal district, and in public session, to organize said municipal board in the manner provided in Art. 4 of this law.

The alcalde shall then state the result of the last census, and shall deliver to the president of the board a duplicate list, in alphabetical order, and with correlative numbering of all the inhabitants above 25 years of age whose names appear in said census, in which shall be stated their ages, residences, and occupations, and whether they are able to read and write. All the sheets belonging to this list shall be signed by the alcalde and the secretary of the municipal board.

The president on his own responsibility shall immediately cause one of the copies of this list to be posted in the usual place for municipal edicts and proclamations, and shall at the same time make known by a proclamation or through the crier that, on the 5th of the aforesaid month of January, at 8 a. m., the municipal census board shall meet in public session in the hall of sessions of the municipal board.

Before the said 5th day of January the judges of first instance shall send to the presidents of the respective municipal census boards a certified list of the judicial decisions which affect the electoral capacity of the inhabitants of each municipal district, and the municipal judges shall send a list, likewise certified, of the aforesaid inhabitants who shall have died since the date of the last quinquennial census.

On the 5th day of January, the municipal board shall organize, in public session, at the time and in the place aforesaid, and the president shall lay on the table the list of residents prepared by the alcalde, the last census, and the certificates sent in by the judges.

The board shall hear all representations that shall be made concerning enrollments, exclusions, and corrections. For claims with regard to enrollment it shall be sufficient to furnish evidence by means of two witnesses that the person whose enrollment in the list is desired possesses the requisites that are legally required to make him an elector.

The public session being terminated, the junta shall proceed to the preparation of the following lists:

1. A list of all the inhabitants who possess the right to vote, according to the census list.

2. A list of those who have died since said list was prepared according to the data furnished by the respective municipal judges.

3. A list of those who are disqualified.

These lists shall be published as provided for in the first paragraph of this resolution, for the three following days, during which time an appeal may be taken to the provincial board.

In the same session the municipal board shall order the division of the voters of the municipal district into sections if their number shall exceed 500, assigning to each section a number approximately equal, according to the conditions of each locality.

This having been done, a copy shall be made in duplicate from the first list in alphabetical order of the names of the voters of each municipal district, divided into sections, and these copies shall constitute the final lists. On the 9th of January one of them shall be transmitted, together with a certificate of the order for the division of the municipal district into sections, and of the complaints which have been presented, to the provincial census board, which shall adopt such decisions as it may think proper, making the proper modifications for the case arising, and shall cause to be printed in the Boletin the lists of the voters of the province before the 20th of January.

A printed copy of the list for each municipal district, authorized by the president and secretary of the provincial board, shall be transmitted, certified, the leaves being all under seal, to the respective president of the municipal board, who shall inform the board, and who shall cause to be posted in a public place for three days, a copy of that document, which shall be placed in the archives. The president and secretary of the junta shall be responsible for the absolute correctness of this copy.

Similar copies shall also be transmitted by the president of the provisional board to the authorities that are declared by the regulations to be entitled to receive them.

There shall be no appeal from the decisions adopted by the provincial boards in virtue of this temporary provision, excepting a complaint to the insular board.

The day previous to that appointed for the first elections to be held after the promulgation of this law the municipal census boards shall meet and order the enrollment in the electoral lists of those who have applied for it up to that date who have the testimony of two witnesses to show that they possess the conditions which this law requires in order that they may vote.

Those enrolled by virtue of these orders or by the decisions of the insular board shall exercise their right in the section in which they are domiciled.

Fourth. Until a new division shall have been made in the electoral districts for deputies to the Cortes in the territory of the islands of Cuba and Puerto Rico, the one now existing shall remain in force.

The insular electoral census boards shall divide the territory of the islands into districts and sections for the election of representatives, pursuant to the royal decree of this date.

Approved by Her Majesty. SAGASTA.

MADRID, *November 25, 1897.*

Articles of the electoral law of the Peninsula of June 25, 1890, in the form in which they are to be enforced, according to article 13 of the law of Cuba and Puerto Rico.

ART. 4. The following are indispensable requirements for admission as a duputy to the congress:

1. To possess the qualifications required by article 29 of the constitution on the day on which the election in the electoral district is held.

2. To have been elected and declared elected in an electoral district, or in the congress, in accordance with the provisions of this law and those of the regulations of that body.

3. Not to be disqualified by any reason of personal incapacity for holding the office on the day on which the election is held.

4. Not to be included in any of the cases established by the law concerning disqualifications.

ART. 5. Disqualified for admission as deputies, although validly elected, are:

1. Those found to be included in any of the cases mentioned in article 2 of this law. The rehabilitation mentioned in No. 2 of article 2 of this law must be secured for the eligibility of a deputy at least two years previous to his election.

2. Contractors for works or public services paid for out of the general funds of the province or municipality; those who, as the result of such contracts, have claims pending in their own interest against the administration and in the sureties and partners of such contractors. This incapacity is to be understood as relating solely to the district or section in which the work or public service is performed.

3. Those who fill, or have filled within a year, in the district or section in which the election is held, any office, charge, or commission, by appointment of the Government, or who have exercised authority in a popular election, among whom are included presidents of deputations, and deputies who, during the previous year, have been members of provincial commissions.

Excepted from this are the ministers of the Crown and officers of the central administration of the islands and of the peninsula.

The disqualifications referred to in No. 3 are confined to the votes cast in the district or section or within the limit of the authority or functions with which the deputy has been invested.

ART. 6. When a deputy shall become disqualified after admission to the congress from any of the causes enumerated in Art. 5, his incapacity shall be declared and he shall immediately forfeit his office.

ART. 7. Those who already hold the office of deputy to the cortes shall not be admitted to the same congress by virtue of a partial election unless they have resigned the same before notice has been given to the district of such partial election.

ART. 8. The office of deputy to the cortes is gratuitous and voluntary, and may be resigned before and after taking the oath of office; but no resignation shall be admissible without the previous approval by the congress of the deputy's certificate of election.

ART. 22. In districts in which a deputy is to be elected no elector shall have the right to vote for more than one person; when more than one and as many as four are to be elected he shall have the right to vote for one less than the number to be elected; for two less if more than four are to be elected, and for three less if more than eight are to be elected.

ART. 37. The following candidates shall have the right to appoint supervisors for the electoral bureaus of the precincts comprising the district or section:

1. Ex-deputies to the Cortes, who have represented the same district or any other on the island.

2. Those who have been candidates in the same district in former elections and obtained at least one-fifth of all the votes cast.

3. Ex-senators elected by the island to which the district or section belongs.

4. Candidates for the office of deputy to the Cortes, proposed by means of tickets signed by electors of the respective district or section, or by notarial instruments, in the preparation of which a competent officer has taken part, the number of such electors being equal to at least one-twentieth of the entire number of those included in the final list of the district or section.

ART. 73. Only in pursuance of a resolution of Congress shall it be possible to proceed to a partial election for deputy in one or more districts, or because the post of representative of such district or districts has become vacant.

ART. 74. For the districts which, according to this law, are to elect three or more deputies, it shall be understood that there is a vacancy in their representation in the Cortes only when, for any reason, at least two deputies fail to act as such.

ART. 75. The royal decree convoking the electoral colleges of one or more districts for the partial election of deputies to the Cortes shall be published in the Gaceta de Madrid within eight days, reckoned from the date of the communication of the resolution of Congress. In the said royal decree the day shall be fixed on which the election shall take place, and that day shall not be fixed before twenty or after thirty days, reckoned from the date of the convocation. The royal decree shall be simultaneously published in the gazettes of Havana and Puerto Rico, according to circumstances, the proper order being communicated for that purpose by telegraph to the respective governors-general of the two Antilles.

ART. 76. The partial election shall take place on the day appointed, according to the procedure and in the form prescribed by this law for general elections.

ART. 77. Congress, exercising the prerogative belonging to it according to article 34 of the constitution, shall examine and judge of the legality of the elections according to the procedure provided by its regulations, and shall admit as deputies those who are found to have been legally elected and proclaimed in the districts, if they possess the capacity necessary to enable them to discharge the duties of the office, and are not disqualified in any of the ways defined by law.

ART. 78. In the case of an election in which the votes for each candidate are equal in number, if only one of the candidates who have received the same number of votes shall possess legal fitness to be deputy he shall at once be proclaimed and admitted, provided that the election is approved.

He who is shown to be legally elected shall likewise be at once admitted and proclaimed by Congress if there shall be, in the certificate of election, protests which seem justified against the votes cast for the other one or more candidates having an equal number of votes.

If there are no such differences, that one of the candidates having an equal number of votes shall be proclaimed deputy who—

(1) Has most frequently filled the office;

(2) Who has filled it for the longest time;

(3) Who is the oldest in years.

ART. 79. The certificates of the ballot board having been sent to the central board, agreeably to the provisions of article 69, shall be delivered by the latter, as they come into his possession, at the office of the secretary of Congress, at whose disposal that board shall, in all cases, hold the other documents relating to certificates of election.

ART. 80. The deputies elect or presumptive, who have proclaimed by the examin-

ing boards (ballot boards) at general elections, shall present their respective credentials within two months, reckoning from the day of the meeting of the Cortes. For those proclaimed elected at partial elections the time shall be reckoned from the day of their proclamation by the examining board (ballot board). It shall be understood that he who does not present his credentials within the period fixed by this article resigns his office, and, consequently, a vacancy in the district or college concerned shall be declared after Congress shall have decided concerning the legality of the election.

ART. 81. If the same individual shall be found to have been elected by two or more districts at the same time, he shall make choice before Congress of one of them within eight days after the last of his certificates of election shall have been approved, if he shall then have been admitted as a deputy, or within thirty days if otherwise.

In default of a choice within either term, the district that belongs to him shall be decided by lot in Congress, and a vacancy shall be declared with respect to the others.

ART. 82. The electors and the candidates who have taken part or been concerned in an election may have recourse to Congress at any time before the approval of the respective certificates of election with such complaints as they may desire to present with regard to the validity or result of such election, or with regard to the legal qualifications of the deputy elect previous to his having been admitted.

ART. 83. When, in order to be able to appreciate and judge of the legality of an election concerning which complaint is made before Congress, it shall be thought necessary to make some negotiations in the locality where such election was held, the president of the chamber shall give and directly communicate orders to the judicial magistrate of the territory whom he may think proper to commission for the purpose, and the commissioned magistrate shall consult with the said President in the performance of his duty without any necessity for the intervention of the Government.

ART. 84. After an election has been approved by Congress and the deputy elected by it has been admitted, no complaint shall be received, nor shall any subsequent discussion be permitted respecting the validity of the said election, or regarding the legal fitness of the deputy, unless on account of incapacity that has occurred since his admission.

Approved by Her Majesty.

SAGASTA.

MADRID, *November 25, 1897.*

[From the Gaceta de Madrid, Saturday, November 27, 1897.]

OFFICIAL.—PRESIDENT OF THE COUNCIL OF MINISTERS.

STATEMENT.

MADAM: In endeavoring to solve the problem of introducing colonial autonomy into the islands of Cuba and Puerto Rico, which task, together with that of the pacification of the territory of Cuba, constitutes the engagements which the Government has contracted with the nation, the ministers think that detailed explanations and comments on the complex matters embraced in the plan should give way to a temperate but full statement of its fundamental character, or of the spheres of action to which it extends and of the consequences which, in their opinion, must be the result of the régime which they propose to Your Majesty for the government of the Spanish Antilles.

Criticism and analysis will speedily elucidate all that relates to the details; the essential ideas and the inspiration of the decree have their appropriate place here and at this time only.

This is the more necessary since the first and most essential condition of success in reforms of this kind is absolute sincerity of purpose. With this sincerity the Government has examined the best form of an autonomic constitution for the islands of Cuba and Puerto Rico, and it hopes clearly to demonstrate, in these observations, that the intention and the results have gone hand in hand.

It was proposed, in the first place, clearly to establish the principle, to develop it in its entirety, and to surround it with every guaranty of success, because, when it is sought to intrust the direction of affairs to peoples that have reached the age of virility, either no mention of autonomy should be made to them or it should be given to them complete, with the conviction that they are started on the right road with the restrictions or shackles which are born of distrust and suspicion. Either the defense of nationality is confided to repression and force or it is turned over to a reconciliation of affection and tradition with interest, and this reconciliation is

strengthened according as it is developed by the advantages of a system of government that teaches and gives evidence to the colonies that under no other will it be possible for them to attain a higher degree of welfare, security, and greatness.

This being the case, it was a condition essential to the attainment of the purpose had in view to seek for that principle a practical form and one that was intelligible to the people that had to be governed by it. and the Government found this in the programme of that insular party, considerable in numbers, but still more important by reason of its intelligence and perseverance, the predictions of which party have, for twenty years past, made the people of Cuba familiar with the spirit, the procedure and the great importance of the serious innovation which they are called upon to introduce into their political and social life.

It is asserted by the foregoing that the project is in nowise theoretical, and that it is not an imitation or copy of other colonial constitutions which have been justly regarded as models in the matter, for although the Government has carefully considered what those instruments teach it realizes that the institutions of peoples which, in their history and their race, differ so much from that of Cuba, can not take root where they have neither precedent nor atmosphere, nor that preparation which is the outgrowth of education and belief.

The problem having been thus defined, inasmuch as the question was to give an autonomic constitution to a Spanish territory peopled by a Spanish race and civilized by Europe, there was no longer any doubt as to the decision to be reached; autonomy had to be developed according to the ideas and the programme which bears that name in the Antilles, without eliminating anything of its contents, and especially without altering its spirit, but rather by completing and harmonizing it and giving it greater guaranties of stability, as should be done by the government of a mother country which feels itself called to establish such a programme, from a conviction of its advantages, from a desire to carry peace and tranquillity to those highly prized territories, and from a consciousness of its own responsibility, not only to the colonies, but also to its own vast interests which time has connected and woven together in the impenetrable net of years.

Being thus sure of the form which best fitted its design, the Government found it easy to distinguish the three aspects offered by the establishment of an autonomic constitution. In the first place, the sacred interests or the mother country, which, being alarmed and distrustful on account of the course pursued by many of her sons, and wounded by the ingratitude of those who put more trust in the selfishness of the speculator than they do in brotherly affection, desires above all things that the change for which she is prepared should draw closer and strengthen the bond of sovereignty, and that in the midst of a blessed peace the interests of all her sons, which are not at variance with each other. although they may be at times different, should be harmonized and developed by the free consent of all.

Next are to be considered the aspirations, the needs, and the desires of our colonial population, which is anxious to be treated like an unfortunate daughter instead of being crushed like an enemy, which is obedient to the call of affection, and ready to rebel like Spaniards against the brutal imposition of exterminating force. These people expect from the mother country a form in which their initiative may be molded and a mode of procedure that may authorize them to manage their own interests.

And finally, this vast and interesting mass of relations created of interests developed in that long past which nobody, still less a Government, is at liberty to disregard or forget, and whose preservation and development involve the fulfillment of the destiny of our race in America, and the glory of the Spanish flag in lands that were discovered and civilized by our ancestors.

These three orders of ideas find their answer in the fundamental provisions of the draft submitted to your Majesty for approval. To the first, that is, to the point of view of the mother country, belong the questions of sovereignty which have been confided to the highest authorities of the Spanish nation. The representation and authority of the King, who is the nation itself, the command of the army and navy, the administration of justice, diplomatic understanding with America, the constant and beneficent relations between the colony and the mother country, the pardoning power and the upholding and defense of the constitution are intrusted to the Governor-General as the King's representative, and under the direction of the council of ministers. Nothing that is essential has been forgotten; the authority of the central power is in nowise diminished or abated.

The insular aspect is, in its turn, developed in a manner as full and complete as could be desired by those who are most exacting, in central, provincial, and municipal autonomy; in the application without reserve or equivocation of the parliamentary system; in the powers of the insular chambers and in the creation of a responsible government, at the head of which, and forming the supreme bond of nationality as regards the executive power, again appears the Governor-General who, on the one hand, presides through responsible ministers over the development of

colonial life, and, on the other, associates and connects it with the general life of the nation.

And that third aspect, in which is recapitulated the history of the relations between the Antilles and the mother country, and within which their commerce, their credit, and their wealth, must also be developed, is defined in a series of provisions of a permanent character, which connects the two executive powers—the insular and the national, and at times, their chambers—in such a manner that at every moment they lend each other mutual aid, and assist each other in developing the common interests.

And all this manifold and complex, though not complicated, system is sanctioned and rendered practical by a series of guaranties of associations of constant understandings and public discussions which will absolutely prevent, so far as it is allowable for man to predict that which is to come, unyielding dilemmas, insurmountable difficulties, and collisions between the colonies and the mother country.

This is a point of so great importance that the Government would certainly have subordinated all other questions to it if such subordination had been necessary, which it can not be, nor is there any reason to fear it, since the bases of the new régime are established upon harmony of interests, scrupulous respect for the rights of others, and the desire in the mother country unremittingly to aid the development, prosperity, and peaceful aggrandizement of her beautiful Antilles, which desire the Government does not doubt will be fully shared there.

This does not mean that no questions will arise in which the two spheres of action will be confounded, and that there will be no legitimate doubts as to which is the predominant interest in them, or that there will not be, after the doubts, more or less of passionate discussion. In no colony enjoying autonomy has this failed to happen; in none has the case arisen in which the central Government was always and systematically in accord with the acts of the colonial government. Long is the list of the legislative enactments of Canada which have been vetoed by the British Government, and curious and exceedingly interesting is the list of judicial decisions which have defined the diverse jurisdictions of their local assemblies, either among themselves or with their governors. This has been the case notwithstanding the fact that the great decentralization, the antecedents of Canadian history, and freedom of trade greatly simplify the relations between the two countries.

The excellence of the system, however, lies in the fact that when such cases arise, and especially when they are frequent, the balance of power both within the colonial constitution and in the relations of the colony to the mother country is such that a remedy is always to be had, that a basis of understanding is never lacking, and that a common ground is always to be found on which interests are either harmonized or their antagonism is settled or the will of the people bows to the decision of the courts.

If, therefore, the rights which are recognized by the constitution as belonging to the citizens are violated or their interests are disregarded by the town boards and deputations which are, in their turn, within the system, entirely autonomous, the courts of justice will defend and uphold them; if corporations go beyond their powers, or if, on the other hand, the executive power undertakes to impair what the constitution of the kingdom or the provisions of this decree declare to be powers belonging to the town boards or the provincial corporations, the accused party has the right to appeal to the courts of the island, and as a last resort to the supreme court, whose duty it will be to settle disputes of jurisdiction between the Governor-General and the colonial parliament, whoever may have given rise to such disputes; both will have the same rights to complain and to seek legal redress for their wrongs

Thus, whatever difficulties may arise from the establishment of a system, or be the outgrowth of its exercise, will be decided by the courts, which have been, since ancient Rome down to modern England, the most progressive source of right, and which have afforded the most flexible procedure for the harmonization of the growing demands of real life and the slow process of legislation.

Thus the autonomic constitution which the Government proposes for the islands of Cuba and Puerto Rico is not exotic or copied, nor is it an imitation. It is an organization *sui generis*, conceived and upheld by the natives of the Spanish Antilles, gladly inscribed by the liberal party in their programme in order that the nation might know what it had to expect from that party when it should come into power, and characterized by a feature which no colonial régime has thus far presented, viz: that the Antilles can be wholly autonomous, in the fullest sense of the word, and at the same time have their representatives and form a part of the national parliament.

So that, while the representatives of the insular people direct from their local chambers the special interests of their country, others elected by the same people aid and cooperate in the Cortes in the making of those laws in whose mould are formed and unified the different elements of Spanish nationality. And this is not a small or paltry advantage; still less does it furnish ground for surprise, as some might, perhaps, think, because this present of the deputies from the Antilles in the

Cortes is a close bond of the nationality which is raised above all the unities which live in its bosom, now sought as one of the greatest political steps in advance of our day by the autonomous English colonies, which are anxious to take part in an Imperial Parliament in the supreme function of legislators and directors of the great British Empire.

This form, therefore, which is characteristic of the system now adopted by Spain, while it gives it its own meaning, signifies, if not a step in advance, such as those engendered by the present time, an advantage which circumstances offer us as a just compensation for the immense disasters which our colonial history recounts.

The Government frankly acknowledges that for the success of its work public discussion in Parliament would have been better, together with the analysis of public opinion in the press, on the lecture platform, and in books; but it is not its fault, as it was not that of the previous Government, if the pressure of circumstances compels it to do without this precious guaranty. Yet if the party which now serves the interests of the Crown and the country in the Government did not hesitate a moment to approve, in its day, the initiative taken by the conservative party, or in voting for the appropriation which it asked from the Cortes, it has a right, now that the weight of circumstances is still heavier than it was then, to hope that public opinion will approve to-day the course pursued by it, and that the Cortes will do so to-morrow.

For this reason it does not hesitate to face the responsibility, and it intends to put into immediate action and practice the solutions which are implied in the present decree with the same sincerity with which it has prepared it, thus removing the suspicion of any indecision in its course or of reservations in its promises. If the régime shall be found wanting in practice for lack of good faith in anybody it will never be—and we are proud to proclaim this—the fault of the men who are actuated above all things by the noble desire to pacify their country.

The Government thinks that it has thus said everything necessary to make known the genesis, the inspiration, and the character of the plan which, establishing in Cuba and Puerto Rico an autonomic régime, it now submits to Your Majesty.

To those who are familiar with the constitution of the Monarchy, the plan will certainly not present any great difficulties, for the Government has, as far as possible, taken for its guide the organic system of that instrument, the division of its titles, and even its wording. The modifications of the constitutional articles are accessory and circumstantial; the additions respond to its specialty and seek to secure the efficiency of its provisions and the facility of their execution.

Doubtless something will remain to be done, and some reforms will be needed; this will be shown simultaneously by the defense of its provisions and the criticisms made thereon, and gradually the good grounds upon which both are based will be ascertained; this will render it possible to incorporate what is good in the plan and to reject what does not harmonize with its fundamental ideas when the time comes for it to receive the sanction of the Cortes.

Let it be understood, nevertheless, that the Government will not eliminate from it, nor will it consent that anything be eliminated that goes to form colonial liberties, guarantees, and privileges, because being prepared to complete its work or to throw light upon doubts, it does not intend that when it presents its plan for parliamentary sanction the concessions made shall suffer any impairment, nor can it consent to do so if it has a majority in the chambers.

But though all that the Government considers necessary to explain in the general lines of the decree has been set forth in the foregoing, it still deems it indispensable, for reasons which will readily be understood, to fix the sense of the articles which refer to autonomy with regard to the tariff, and which refer to the debt which burdens the Cuban treasury.

The export trade from the Peninsula to Cuba, which amounts to about $30,000,000 per annum, and which, moreover, furnishes ground for important combinations for navigation on the high seas, has hitherto been subjected to an exceptional régime which is absolutely incompatible with the principle of colonial autonomy.

This implies the power to regulate the conditions of its import and export trade and to have free control of its custom-houses. To refuse these privileges to Cuba or Puerto Rico would be tantamount to nullifying the value of the principles laid down; to endeavor to defeat their object would be incompatible with the dignity of the nation. What it behooves the Government to do, after recognizing the principle in its entirety, is to endeavor to cause the transition to take place without violence or injury to the interests which have been developed under the old system, and for this purpose to pave the way to an understanding with the governments of the Antilles.

The most earnest advocates of autonomy have never denied the willingness of those countries to recognize, in behalf of genuinely national industry and commerce, a margin that should secure that market to them.

This assurance has always been given by their representatives in the Cortes, and is still given by their representatives in the Cortes, and is still given by all parties in the Island of Cuba, according to statements which the Government considers irrecusable.

Complaints arose, not from the existence of discriminating duties, but from the fact that those duties were too high, and that this prevented the Antilles from securing the markets which they needed for their rich and abundant productions, and from the lack of reciprocity. Thus, as no insurmountable difficulties exist, there is ground for saying that an understanding is more than possible; that it is certain, especially when it is considered that the exports from the peninsula to Cuba consist of about fifty articles of the four hundred that are specified in the tariff, and that of these fifty many, owing to their special character, and owing to the customs and tastes of the Cubans, will never have reason to fear the competition of foreign articles.

The manufacturers and shipowners of the Peninsula have no cause for alarm owing to the establishment of a system of autonomy, which, while it modifies the conditions on which the tariff is based, does not alter the essential bases of the economic relations between Spain and the Antilles. There will doubtless be some difficulties to be harmonized, or it will be necessary to settle the inevitable differences accompanying any change of the mercantile régime; it will be necessary to combine both tariffs in some way; but neither are the interests of Cuba opposed to those of the Peninsula, nor is it to any one's interest to diminish the commercial relations existing between the two countries.

If then the insular government were already established, and if with it it had been possible to agree upon a system of mercantile relations, this question would not have assumed proportions which it does not possess; nor would there be any cause for predicting ruin and disaster; the facts would put suppositions to silence. Notwithstanding this, the Government has thought that in order to quiet alarm, it was proper for it to anticipate events, and that instead of leaving the settlement of the question to the natural working of the new constitution, it was proper to fix without further delay the bases of our future mercantile relations. In doing this and with a view to removing all cause of distrust, it has gone so far as to fix a maximum for the differential duties that are to be obtained by peninsular goods, offering, as was right and just, the same rates to insular productions.

The basis of the understanding having been fixed and determined, the principle of autonomy having been guaranteed, the equality of powers having been established in an unquestionable manner in the procedure that is to be observed, and the spirit which actuates those islanders being known, the negotiation will be easy and its results will be advantageous to both parties.

As to the debt which burdens the Cuban treasury, either directly or owing to the guarantee which it has given to that of the Peninsula, and which the latter bears analogously, the justice of dividing it in an equitable manner when the termination of the war shall render it possible to fix its definitive amount is not to be doubted for a moment.

This debt, let us hope, will not be so enormous as to amount to an insupportable burden upon the energy of the nation, nor is the nation so lacking in resources that it needs to feel alarm at the prospect before it. A country which during the past few months has given such strong evidence of virility and social discipline; a territory like that of Cuba, which, even in the midst of its political convulsions and of war scarcely interrupted for thirty years, has produced so great wealth by cultivating only a small part of its fertile soil, and which has done this by its own strength alone, with few institutions of credit, struggling against sugar on which a bounty is paid, the American market being closed to its manufactured tobacco, and at the same time changing slave labor into free labor, may calmly contemplate the payment of its obligations and inspire its creditors with confidence.

Consequently, in the opinion of the Government, it is important to think from this time forward of the manner in which the debt is to be paid, rather than of its division, applying the economic methods of our day to the great wealth which the soil of Cuba secures to agriculturists and which the bowels of the earth secure to miners, and taking advantage of the extraordinary facilities offered to the commerce of the world by the insular form and the geographical situation of what has rightly been called the "Pearl of the Antilles."

If no legislation can yet be enacted concerning these things, it is proper to bear them in mind very carefully and to pay much attention to them, since it has occurred to others who certainly can not be charged with being visionary or forming illusions—it has occurred to them, I say, to take advantage of this great germ of wealth, not, indeed, for the benefit of Spain or to uphold her sovereignty; when they do this, it would be fooling not to follow their example and not to convert into a redemption of the past and a guaranty of the future what has perhaps been an incentive to war and the origin in a great measure of the evils which we are now so eagerly seeking to remedy.

Basing its action on these considerations, the Government has the honor to submit the inclosed draft of a decree to Your Majesty for approval.

Madam, at Your Majesty's royal feet,

PRÁXEDES MATEO SAGASTA.

MADRID, *November 25, 1897.*

ROYAL DECREE.

By the advice and consent of my council of ministers. In the name of my august son, King Alfonso XIII, and as Queen Regent of the Kingdom, I decree as follows:

TITLE I.—*Of the government and administration of the islands of Cuba and Puerto Rico.*

ARTICLE I. The islands of Cuba and Puerto Rico shall hereafter be governed and administered in accordance with the following provisions:

Explanatory note.

To facilitate the understanding of this decree and to prevent confusion as regards the legal value of the terms therein used the following definitions must be remembered:

Executive central power: The King with his council of ministers.
Spanish Parliament: The Cortes with the King.
Spanish Chambers: The Congress and the Senate.
Central Government: The council of ministers of the Kingdom.
Colonial parliament: The two chambers with the Governor-General.
Colonial chambers: The council of administration and the chamber of representatives.
Colonial legislative assemblies: The council of administration and the chamber of representatives.
Governor-General in council: The Governor-General, with his secretaries.
Instructions of the Governor-General: Those which he received when he was appointed to his post.
Statute: Colonial provision of a legislative character.
Colonial statutes: The colonial legislation.
Legislation or general laws: The legislation or laws of the Kingdom.

ART. 2. The government of each one of the islands shall be composed of an insular parliament, divided into two chambers, and of a governor-general representing the mother-country, who, in the name of the latter, shall exercise supreme authority.

TITLE II.—*Of the insular chambers.*

ART. 3. The insular chambers, together with the governor-general, shall have power to legislate concerning colonial affairs in the manner and on the terms provided by law.

ART. 4. The islands shall be represented by two bodies, whose power shall be equal, viz: The chamber of representatives and the council of administration.

ART. 5. The council shall be composed of 35 members, of whom 18 shall be elected in the manner prescribed in the electoral law, and the remaining 17 shall be designated by the King, and in his name by the governor-general, from among those possessing the requirements enumerated in the following articles:

ART. 6. To be entitled to a seat in the council of administration it shall be necessary to be a Spaniard; to have attained the age of 35 years; to have been born in the island, or to have resided there uninterruptedly for four years; not to be under criminal prosecution; to be in the full enjoyment of one's political rights; not to have one's property embargoed; to have had for two or more years an income of one's own amounting to $4,000, and to have no part in contracts with the central government or with that of the island.

Stockholders in joint-stock companies shall not be considered as having a contract with the government, although the society to which they belong may have one.

ART. 7. Those who, in addition to the requirements mentioned in the foregoing article, possess any one of the following, may be elected or designated as members of the council of administration:

(1) Being or having been a senator of the Kingdom, or having the requirements specified in Title III of the constitution for the discharge of the duty of that office.

(2) Having discharged for two years the duties of one of the offices mentioned below:

That of presiding judge of the superior court of Havana, or of the Government attorney attached to that court; that of rector of the University of Havana; that of a member of the old council of administration; president of the chamber of commerce of the capital; president of the Economic Society of Friends of the Country, of Havana; president of the Club of Landholders; president of the Tobacco Manufacturers' Union; president of the League of Merchants, Manufacturers, and Agriculturists of Cuba; dean of the Illustrious College of Lawyers, of the capital; alcalde of Havana; president of its provincial deputation for two terms of two years each, or president of a provincial deputation for three such terms; dean of any of the cathedral cabildos.

(3) The following persons may likewise be elected or designated: Land owners whose names appear in the list of the 50 largest taxpayers on land held by them, or in that of the first 50 for trade, professions, industry, and arts.

ART. 8. The appointment of the members of the council whom the Crown may designate shall take place by special decrees, in which the ground on which the appointment is based shall always be stated.

The members of the council thus appointed shall hold their office during life.

One-half of the elective members of the council shall be renewed every five years, and all shall be renewed whenever the Governor-General shall dissolve the council of administration.

ART. 9. The requirements necessary to be appointed or elected councilor of administration may be changed by a law of the kingdom at the request or in accordance with the suggestion of the insular chambers.

ART. 10. Members of the council of administration shall accept no office and no title or decoration while the sessions last, but both the local and the central government may confer upon them, within their respective office or categories, such commissions as the public service may require.

The office of secretary of the government shall be excepted from the provisions contained in the foregoing paragraphs.

TITLE IV.—*Of the chamber of representatives.*

ART. 11. The chamber of representatives shall be composed of the persons named by the electoral boards in the manner provided by law and in the proportion of one to every 25,000 inhabitants.

ART. 12. In order to be elected a representative it is necessary to be a Spaniard, not in clerical orders, of full age, to be in the enjoyment of all one's civil rights, to have been born in the Island of Cuba, or to have resided there for four years, and not to be under a criminal prosecution.

ART. 13. Representatives shall be elected for five years, and may be reelected indefinitely.

The insular chamber shall decide with what functions the office of representative is incompatible, and shall determine in what cases a representative may be reelected.

ART. 14. Representatives upon whom the central or local government shall confer a pension, an office, a promotion out of the regular course, a commission with salary, honors or decorations, shall cease to hold their office, without the necessity of any declaration if, within the fifteen days immediately following their appointment, they do not inform the chamber that they decline to accept the favor conferred.

What is contained in the foregoing paragraph does not include representatives who are appointed government secretaries.

TITLE V.—*Of the manner in which the insular chambers are to perform their functions, and of the relations between them both.*

ART. 15. The chambers shall meet every year. It shall be the duty of the King, and in his name of the Governor-General, to convoke or suspend them, to close their sessions, and to dissolve separately or simultaneously the chamber of representatives and the council of administration, with the obligation to convoke them again or to renew them within three months.

ART. 16. Each one of the colegislative bodies shall draw up its own regulations and shall examine both the qualifications of the persons who compose them and the legality of their election.

Until the chamber of representatives and the council of administration shall have approved their regulations, they shall be governed by the regulations of the congress of deputies or by those of the senate, respectively.

ART. 17. Both chambers shall choose their president, vice-presidents, and secretaries.

ART. 18. One of the two legislative bodies shall not be in session unless the other is also.

The case is excepted in which the council of administration shall perform judicial functions.

ART. 19. The insular chambers shall not deliberate together or in presence of the Governor-General.

Their sessions shall be public, although in cases in which secrecy is required each one may hold a secret session.

ART. 20. It shall be the duty of the Governor-General, through the governmental secretaries, just as it shall be that of each one of the two chambers, to initiate and propose the colonial statutes.

ART. 21. The colonial statutes concerning taxes and public credit shall be first laid before the chamber of representatives.

ART. 22. Resolutions in each one of the co-legislative bodies shall be taken by a plurality of votes; but in order to pass enactments of a legislative character, the presence of one-half plus one of the total number of members composing it shall be required. The presence of one-third of the members shall, however, be sufficient for deliberation.

ART. 23. In order that a resolution may be understood to have been passed by the insular parliament, it shall be necessary for it to have been approved both by the chamber of representatives and by the council of administration.

ART. 24. The colonial statutes, when approved in the manner provided in the foregoing article, shall be laid before the Governor-General by the officers of the respective chambers for his sanction and promulgation.

ART. 25. The members of the council of administration and those of the chamber of representatives shall be inviolable as regards their opinions and votes in the discharge of the duties of their office.

ART. 26. The members of the council of administration shall not be prosecuted or arrested without a previous resolution of the council, unless when they are taken in flagrante delicto or when the council is not in session; but in all cases a report shall be made to that body as speedily as possible, in order that it may reach a proper determination. The representatives shall, moreover, not be prosecuted or arrested during the sessions of the chamber without its permission, unless they are taken in flagrante delicto; but in this case, and in that of their being prosecuted or arrested when the chambers are closed, a report shall be made as speedily as possible to the chamber of representatives, for its information and decision.

The superior court of Havana shall take cognizance of criminal cases against members of the council and representatives, in such cases and in such manner as the colonial statutes provide.

ART. 27. The guarantees provided in the foregoing article shall not be applicable to cases in which a member of the council or a representative shall declare that he is the author of articles, books, pamphlets, or printed matter of any kind in which soldiers are incited to sedition, or in which the Governor-General is insulted or slandered, or an attack is made upon the national integrity.

ART. 28. The relations between the two chambers shall be regulated, until further orders, by the law concerning the relations between both colegislative bodies bearing date of July 19, 1837.

ART. 29. In addition to holding the colonial legislative power, it shall be the duty of the insular chambers:

(1) To administer to the Governor-General the oath that he will uphold the constitution and the laws which guarantee the autonomy of the colony.

(2) To make effective the responsibility of the governmental secretaries who, when accused by the chamber of representatives, shall be tried by the council of administration.

(3) To address the central Government through the governor-general in order to propose to it the abrogation or modification of the laws of the Kingdom which are in force, to request it to present drafts of laws concerning determinate matters, or to request it to adopt resolutions of an executive character on subjects which interest the colony.

ART. 30. In all cases in which, in the opinion of the governor-general, the national interests may be affected by the colonial statutes, the presentation of drafts of ministerial initiative shall be preceded by their communication to the central Government.

If the project shall be the outgrowth of parliamentary initiative, the colonial Government shall ask for the postponement of the discussion until the central Government shall have expressed its opinion.

In both cases the correspondence that has passed between the two governments shall be communicated to the chambers and shall be published in the Gazette.

ART. 31. Conflicts of jurisdiction between the different municipal assemblies, provincial and insular, or with the executive power, which owing to their nature shall not be referred to the central Government, shall be submitted to the courts of justice, in accordance with the provisions of this decree.

TITLE VI.—*Of the powers of insular parliament.*

ART. 32. The insular chambers shall have power to legislate concerning all matters that have not been specially and determinately reserved to the Cortez of the Kingdom or the central Government, according to the present decree or to the provisions that may hereafter be adopted as provided in article 2 additional.

Consequently, the enumeration presuming no limitation of their powers, it shall be their duty to decide concerning all matters that belong to the ministries of grace and justice, government, finance and fomento, in its three divisions, public works, education, and agriculture.

It shall likewise be their duty to obtain special information with regard to all matters of a purely local nature which principally affect the colonial territory; and in this sense they may decide concerning administrative organization and division, whether territorial, provincial, municipal, or judicial; concerning public health, both on sea and land; concerning public credit, banks, and the monetary system.

These powers are to be understood as not interfering with those belonging, in connection with the same matters, according to law, to the colonial executive power.

ART. 33. It shall likewise be the duty of the insular parliament to prepare the regulations for the execution of those laws enacted by the Cortes of the Kingdom that shall be expressly confided to it. In this sense it specially belongs to it (and it may do so at its very first meeting) to decide concerning electoral procedure, the preparation of the census, the qualifications of electors, and the manner in which elections shall be held; but its decisions shall in nowise affect the rights of citizens as they are recognized by the electoral law.

ART. 34. Although the laws relating to the administration of justice and the organization of the courts are of a general character, and therefore obligatory upon the colony, the Colonial Parliament may, subject to them, adopt such rules or propose to the Central Government such measures as may facilitate the entrance, retention, and promotion in the local courts of the natives of the Island, or of those who practice the legal profession there. The Governor-General in council shall exercise the powers which, as regards the appointment of legal officers, subordinates, and assistants, and as regards other matters connected with the administration of justice, are now exercised by the ministry of the colonies so far as the Island of Cuba is concerned.

ART. 35. It shall be an exclusive power of the Insular Parliament to prepare the local budget both of expenditures and receipts, and to prepare that of the receipts necessary to meet the portion of expense of the national budget which is payable by the Island.

To this effect, the Governor-General shall lay before the Chambers, before the month of January of each year, the budget for the following fiscal year, divided into two parts, the first of which shall contain a statement of the receipts necessary to meet the expenses of sovereignty; the second, the expenditures and receipts which properly belong to the colonial administration.

Neither of the chambers shall deliberate concerning the colonial budget without having definitely passed upon the portion relating to the expenses of sovereignty.

ART. 36. It shall be the duty of the Cortes of the Kingdom to decide what are to be considered, from their nature, as obligatory expenses inherent in sovereignty, and also to fix every three years the amount thereof and the receipts necessary to meet them, the Cortes having always the right to change this provision.

ART. 37. The negotiation of treaties of commerce affecting the Island of Cuba, whether they are due to the initiative of the insular government or to that of the central Government, shall always be conducted by the latter, assisted in both cases by special delegates, duly authorized by the colonial government, the conformity of which treaties to what has been agreed upon shall be shown when they are laid before the Cortes of the Kingdom.

These treaties, if they shall be approved by the Cortes, shall be published as laws of the Kingdom, and as such they shall remain in force in the territory of the Island.

ART. 38. Treaties of commerce in the negotiation of which the Insular Government shall not have taken part shall be communicated to it when they shall become laws of the Kingdom, in order that it may, within three months, declare whether it desires to adhere to their stipulations or not. In case of its desiring to adhere to them the Governor-General shall publish a statement to that effect in the Gazette as a colonial statute.

ART. 39. It shall further be the duty of the Insular Parliament to prepare the tariff and to designate the duties to be paid on goods, both when imported into the territory of the Island and when exported therefrom.

ART. 40. By way of transition from the present régime to that for which provision is hereby made, and without prejudice to what may be agreed upon at the proper time by the two Governments, commercial relations between the Peninsula and the Island of Cuba shall be governed by the following provisions:

(1) No duty, whether of a fiscal character or not, and whether established for imports or exports, shall be differential to the detriment of insular or peninsular productions.

(2) A list of articles of direct national origin shall be prepared by both Governments, for which articles there shall be established by common consent a differential duty on those similar to them of foreign origin.

In another similar list, prepared in the same manner, those productions of insular origin shall be determined which are to receive privileged treatment when imported into the Peninsula. The rate of the differential duties shall likewise be determined.

This differential duty shall in no case exceed, for both origins, 35 per cent.

If, in the preparation of both lists and in the fixing of the protective duties, there shall be an agreement between the two governments, the lists shall be considered definitive and shall be adopted at once. If there shall be any disagreement, the point in dispute shall be submitted for decision to a commission of deputies of the Kingdom, consisting equally of natives of Cuba and of the Peninsula. This commission shall choose its president. If no agreement shall be reached concerning his appointment, the oldest officer shall preside. The president shall have a vote by virtue of his office.

(3) The tables of valuations for the articles enumerated in the two lists mentioned in the foregoing number shall be adopted by common consent, and shall be revised every two years, a hearing being granted to both parties. The modifications which it shall be proper to make, in view thereof, in the tariff, shall be at once carried out by the respective governments.

TITLE VII.

ART. 41. The supreme government of the colony shall be vested in a governor-general, who shall be appointed by the King, on motion of the council of ministers. In this capacity he shall exercise, as a vice-royal patron, the powers inherent in the patronate of the Indies; he shall have the chief command of all the armed forces, both naval and military, in the island; he shall be the representative of the ministries of state, war, navy, and the colonies; all the authorities of the island shall be subordinate to him, and he shall be responsible for the preservation of order and of the safety of the colony.

The Governor-General, before assuming the duties of his office, shall make oath before the King that he will perform them faithfully and loyally.

ART. 42. The Governor-General, as the representative of the nation, shall perform by himself, and assisted by his secretaries, all the duties mentioned in the foregoing articles, and that may be incumbent upon him as the direct representative of the King in matters of a national character. It shall be the duty of the Governor-General, as the representative of the mother country:

(1) To designate freely the employees of his secretariat.

(2) To publish, execute, and cause to be executed on the island the laws, decrees, treaties, international conventions, and other instruments emanating from the legislative branch of the Government, and likewise the decrees, royal orders, and other instruments emanating from the executive branch that shall be communicated to him by the ministries, whose representative he is.

When, in his judgment, and that of the secretaries of his administration, the decisions of Her Majesty's Government might cause injury to the general interests of the nation, or to the special interests of the island, he shall suspend their publication and execution, making a report thereof and of the causes upon which his decision is based to the proper ministry.

(3) To exercise the pardoning power in the name of the King within the limits which shall have been specially marked out for him in his instructions, and to suspend the execution of capital punishment in cases in which the gravity of the circumstances may demand it, or the urgency of the case may not allow time to solicit and obtain pardon from Her Majesty, the opinion of the secretaries being heard in all cases.

(4) To suspend the guaranties named in articles 4, 5, 6, and 9, and paragraphs 1, 2, and 3 of article 13, of the constitution of the State, to enforce the laws relative to public order, and to take all such measures as he may deem necessary for the preservation of peace within, and of security outside of the territory that is intrusted to him, the council of secretaries being previously heard.

(5) To take care that justice be speedily and properly administered in the colony, in which it shall always be administered in the name of the King.

(6) To communicate directly concerning matters of external policy with the representatives, diplomatic agents, and consuls of Spain in America.

Correspondence of this kind shall be communicated in its entirety and simultaneously to the minister of state.

ART. 43. It shall be the duty of the Governor-General, as the superior authority of the island and the head of its administration:

(1) To take care that the rights, powers, and privileges recognized or hereafter to be recognized as belonging to the colonial administration, be duly respected and upheld.

(2) To sanction and publish the enactments of the insular parliament, which shall be laid before him by the president and secretaries of the respective chambers.

When the Governor-General shall consider that an enactment of the insular parliament goes beyond the powers of that body, violates the rights of citizens which are recognized in Title I of the constitution, or the guarantees fixed by law for the exercise of those rights, or jeopardizes the interests of the colony or of the State, he

shall send the enactment to the council of ministers, of the Kingdom which, in a period not exceeding six months, shall approve it or return it to the Governor-General, with a statement of the reasons that it may have for objecting to its sanction and promulgation. The insular parliament, in view of these reasons, may again deliberate concerning the matter and modify the enactment, if it thinks proper, without the necessity of a special proposition.

If two months shall pass without the central Government's having expressed its opinion concerning an enactment of the Chambers that shall have been transmitted to it by the Governor-General, that officer shall sanction and promulgate it.

(3) To appoint, suspend, and remove the employees of the colonial administration, on motion of the respective secretaries of the Government, and in accordance with the laws.

(4) To appoint and remove freely the secretaries of the Government.

ART. 44. No order of the Governor-General, issued in his capacity as representative and head of the colony, shall be carried out unless it is countersigned by a secretary of the government, who, by this act alone, becomes responsible therefor.

ART. 45. The secretaries of the government shall be five:

Grace, justice, and of the interior.

Finance.

Public instruction.

Public works and means of communication.

Agriculture, industry, and commerce.

The secretary, who shall be appointed by the Governor-General, shall be president. The Governor-General may likewise appoint a president without a determinate department.

The insular parliament shall have power to increase or diminish the number of the secretaries of the Government, and also to determine what matters belong to the department of each.

ART. 46. The secretaries of the Government may be members of the chamber of representatives or of the council of administration, and take part in the discussions of both bodies; but they shall only have a vote in that to which they belong.

ART. 47. The secretaries of the Government shall be responsible for their acts to the insular chambers.

ART. 48. The Governor-General shall not modify or revoke his own orders when they shall have been sanctioned by the Government, whether they are declaratory of rights, or have served as a basis for a judicial decision, or shall have reference to his own competency.

ART. 49. The Governor-General shall not delegate the powers of his office on absenting himself from the island without the express permission of the Government.

In cases of absence from the capital, which shall prevent him from transacting business, or of the impossibility of his doing so, he may designate a person or persons to act in his stead, if the Government shall not previously have done so, or if, in his instructions, there is no provision made for the appointment of a substitute.

ART. 50. The supreme court shall take cognizance, without appeal, of all charges defined in the penal code that shall be made against the governor-general.

The council of ministers shall take cognizance of any malfeasance in office committed by him.

ART. 51. The Governor-General, notwithstanding the provisions contained in the various articles of this decree, may act by himself and on his own responsibility, without granting a hearing to the secretaries of the Government in the following cases:

(1) When the question is of the transmission to the Government of the enactments of the insular chambers, especially when he considers that the rights guaranteed in Title I of the constitution of the monarchy or the guarantees provided by law for their exercise are violated by those enactments.

(2) When the law relative to public order is to be executed, especially if there is no time or any way to consult the central government.

(3) When the question is of the execution and fulfillment of laws of the Kingdom sanctioned by His Majesty, and operative in all the Spanish territory or that of its Government.

A law shall provide for the procedure and means of action that may be used in such cases by the Governor-General.

TITLE VIII.—*Of the municipal and provincial régime.*

ART. 52. Municipal organization shall be obligatory in every center of population containing more than 1,000 inhabitants. Localities containing a smaller population may organize services of a common character by special agreements.

Any municipal board that is legally constituted shall have power to legislate concerning public instruction, communication by land, river, or sea, concerning local health, the municipal budgets, and to appoint and remove its employees at will.

ART. 53. At the head of each province there shall be a deputation, elected in the manner provided by the colonial statutes and composed of a number of members in proportion to its population.

ART. 54. The provincial deputations shall be autonomous in everything relating to the creation and dotation of establishments of public instruction and charitable institutions, provincial means of communication by land, river, or sea, the preparation of their budgets, and the appointment and removal of their employees.

ART. 55. Both the municipal boards and provinces may freely provide for the receipts necessary to meet the expenditures of their budgets without any limitation other than that of making them harmonize with the general system of taxation of the island.

The means derived from the provincial budget shall be independent of those derived from the municipal budget.

ART. 56. The councilmen elected by the municipal districts shall be alcaldes and acting alcaldes.

ART. 57. The alcaldes shall perform the active duties of the municipal administration without any limitation whatever, as executors of the enactments of the municipal governments and as their representatives.

ART. 58. Both the councilmen and the provincial deputies shall be civilly responsible for any injuries that may be caused by their acts.

They may be held thus responsible before the ordinary courts.

ART. 59. The provisional deputations shall freely choose their presidents.

ART. 60. Elections for councilmen and provincial deputies shall be held in such a manner that the minorities may be legitimately represented therein.

ART. 61. The provincial and municipal law now in force in Cuba shall continue in force so far as it is not at variance with the provisions of this decree, until the colonial parliament shall decide concerning these matters.

ART. 62. No colonial statute shall deprive the municipal boards or the deputations of the powers recognized in the foregoing articles as belonging to them.

TITLE IX.—*Of guarantees for the enforcement of the colonial constitution.*

ART. 63. Any citizen may apply to the courts when he thinks that his rights have been violated or his interests injured by the enactments of a municipal board or of a provincial deputation.

The Government attorney, if he shall be requested to do so by the agents of the colonial executive power, shall likewise prosecute before the courts any infractions of law or abuses of power that may have been committed by the municipal governments and the deputations.

ART. 64. In the cases referred to in the foregoing article the following courts shall be competent:

For complaints against the municipal boards, the superior court of the territory.

For complaints against the provincial deputations, the superior court of Havana.

These courts, when they have to decide cases of abuses of power by the aforesaid bodies, shall decide in full court. Appeal may be taken from the decisions of the territorial courts to the superior court of Havana, and from the decisions of this latter court to the supreme court of the Kingdom.

ART. 65. The privileges granted in article 62 to any citizen may be exercised collectively by means of a public action, an attorney or representative being appointed for that purpose.

ART. 66. Without prejudice to the powers granted to him in Title V, the Governor-General, when he shall think proper, may have recourse, in his capacity as head of the colonial executive power, to the superior court of Havana, to the end that that court may decide conflicts of jurisdiction between the colonial executive power and the legislative chambers.

ART. 67. If any question of jurisdiction shall arise between the insular parliament and the Governor-General in his capacity as representative of the Central Government, which, on petition of the former, shall not be submitted to the council of ministers of the Kingdom, each of the two parties may submit it for decision to the supreme court of the Kingdom, which shall decide in full court and without appeal.

ART. 68. Decisions having reference to the cases provided for in the foregoing articles shall be published in the collection of colonial statutes, and shall form part of the laws of the island.

ART. 69. Any municipal enactment having for its object the contraction of municipal loans or debts, shall have no executive force unless it shall be approved by a majority of the residents, when a demand to this effect shall have been made by one-third of the members of the municipal board.

A special statute shall determine the amount of the loan, or of the debt which according to the number of residents of the municipal district shall be necessary, in order that the case may be referred to the vote of the residents.

ART. 70. All provisions of a legal character, emanating from the colonial parliament or the courts, shall be compiled under the name of colonial statutes in a legislative collection, the preparation and publication of which shall be intrusted to the Governor-General as head of the colonial executive power.

ADDITIONAL ARTICLES.

ARTICLE 1. Until colonial statutes shall have been published in due form the laws of the Kingdom shall be considered applicable to all matters that are to be acted upon by the insular government.

ART. 2. When the present constitution for the islands of Cuba and Puerto Rico shall have been approved by the Cortes of the Kingdom, it shall not be modified otherwise than by a law and at the request of the insular parliament.

ART. 3. The provisions of the present decree shall be enforced in their entirety in the Island of Puerto Rico; but in order to adapt them to the population and the nomenclature of that island they shall be published in a special decree for Puerto Rico.

ART. 4. Contracts relative to public services common both to the Antilles and the Peninsula that are in course of execution shall continue in their present form until their termination, and shall be governed in all respects by the conditions of the contract. With regard to contracts that have not yet begun to be executed, but have been already agreed upon, the Governor-General shall consult the central Government or the colonial chambers, if necessary, and the definitive form in which they shall be concluded shall be determined by common consent between the two governments.

TRANSIENT ARTICLES.

ARTICLE 1. In order to accomplish with the greatest rapidity possible, and with the least interruption of the services, the transition from the present system to that which is created by this decree, the Governor-General, when he shall think that the proper time has arrived, shall, after consulting the central Government, appoint the Government secretaries to whom reference is made in article 45, and with them shall conduct the interior government of the Island of Cuba until the insular chambers shall have been constituted.

The secretaries appointed shall cease to hold their offices when the Governor-General shall take his oath of office before the insular chambers, when they shall immediately be replaced by the Governor with persons who, in his opinion, most fully represent the majorities of the chamber of representatives and of the council of administration.

ART. 2. The manner of meeting the expenditures occasioned by the debt which now burdens the Spanish and the Cuban treasury, and that which shall have been contracted until the time of the termination of the war, shall form the subject of a law wherein shall be determined the part payable by each of the two treasuries and the special means of paying the interest thereon, and of the amortization thereof, and, if necessary, of paying the principal.

Until the Cortes of the Kingdom shall decide this point, there shall be no change in the conditions on which the aforesaid debts have been contracted, or in the payment of the interest and amortization, or in the guarantees of said debts, or in the manner in which the payments are now made.

When the apportionment shall have been made by the Cortes, it shall be for each one of the treasuries to make payment of the part assigned to it.

Engagements contracted with creditors under a pledge of the good faith of the Spanish nation, shall in all cases be scrupulously respected.

Done at the Palace, this 25th day of November, 1897.

MARÍA CHRISTINA.

PRÁXEDES MATEO SAGASTA,
President of the Council of Ministers.

COPY OF CORRESPONDENCE IN RE MAINE DISASTER.

[Telegrams.]

General Lee to Mr. Day.

HAVANA, *January 12, 1898.*

Mobs, led by Spanish officers, attacked to-day the offices of the four newspapers here advocating autonomy. Rioting at this hour, 1 p. m., continues.

HAVANA, *January 12, 1898.*

Much excitement, which may develop into serious disturbances. The trouble commenced by those who oppose autonomy, and so far is directed against those who advocate it. No rioting at present, but rumors of it are abundant. Palace heavily guarded. Consulate also protected by armed men.

HAVANA, *January 13, 1898.*

After a day and night of excitement, all business suspended, and rioting, everything quiet at this hour. City heavily guarded. Soldiers protect public squares and threatened points. Mobs shouted yesterday: "Death to Blanco and death to autonomy," while "Viva Weyler" was frequently heard. Contest between Spanish factions. Attention has not yet been directed to other issues. Heard once yesterday of a few rioters shouting a proposal to march to our consulate. Presence of ships may be necessary later, but not now.

[Telegram.]

General Lee to Mr. Day.

HAVANA, *January 13, 1898.*

Three newspaper offices, not four, as previously cabled, were attacked yesterday by Spanish officers and mob. Saw mob assault two; saw soldiers sent to protect them fraternizing with mob; two attacks were attempted to-day. I am told that troops massed inside of palace to protect Governor-General shout: "Death to autonomy! Death to Blanco!" Uncertainty exists whether Blanco can control the situation. If demonstrated he can not maintain order, preserve life, and keep the peace, or if Americans and their interests are in danger, ships must be sent, and to that end should be prepared to move promptly. Excitement and uncertainty predominates everywhere.

[Telegrams.]

General Lee to Mr. Day.

HAVANA, *January 14, 1898.*

Noon. All quiet.

HAVANA, *January 15, 1898.*

Quiet prevails.

[Telegrams.]

Mr. Day to Mr. Lee.

WASHINGTON, *January 22, 1898.*

Wire number and character naval vessels other countries now in port of Havana.

Mr. Lee to Mr. Day.

HAVANA, *January 22, 1898.*

None. Two German naval vessels are expected this month.

[Telegrams.]

Mr. Day to Mr. Lee.

WASHINGTON, *January 24, 1898.*

It is the purpose of this Government to resume friendly naval visits at Cuban ports. In that view, the *Maine* will call at the port of Havana in a day or two. Please arrange for a friendly interchange of calls with authorities.

Mr. Lee to Mr. Day.

HAVANA, *January 24, 1898.*

Advise visit be postponed six or seven days, to give last excitement more time to disappear. Will see authorities and let you know result. Governor-General away for two weeks. I should know day and hour visit.

Mr. Day to Mr. Lee.

WASHINGTON, *January 24, 1898.*

Maine has been ordered. Will probably arrive at Havana some time to-morrow. Can not tell hour; possibly early. Cooperate with authorities for her friendly visit. Keep us advised by frequent telegrams.

[Telegrams.]

Mr. Lee to Mr. Day.

HAVANA, *January 25, 1898.*

At an interview authorities profess to think United States has ulterior purpose in sending ship. Say it will obstruct autonomy, produce excitement, and most probably a demonstration. Ask that it is not done until they can get instructions from Madrid, and say that if for friendly motives, as claimed, delay unimportant.

[Telegrams.]

Mr. Lee to Mr. Day.

HAVANA, *January 25, 1898.*

Ship quietly arrived 11 a. m. to-day. No demonstration so far.

Mr. Lee to Mr. Day.

HAVANA, *January 25, 1898.*

Commanders of Spanish naval ships and of German training ship have called upon commander of *Maine* and their visits will be returned afternoon. Salutes exchanged. All quiet.

Mr. Lee to Mr. Day.

HAVANA, *January 25, 1898.*

Have just received visit of commander of *Maine* and will return it to-morrow. He had already returned official visits of Spanish and other naval officers. No disorders of any sort.

Mr. Lee to Mr. Day.

HAVANA, *January 25, 1898.*

Another German naval vessel arrived this morning. Peace and quiet reign.

[Telegrams.]

General Lee to Mr. Day.

HAVANA, *January 26, 1898.*

Have just had pleasant visit on *Maine.*

shipping in harbor, and in city. Business suspended. Theaters closed. Dead will number about 260. Officers' quarters being in rear and seamen's forward, where explosion took place, accounts for greater proportionate loss sailors. Funeral to-morrow, 3 p. m. Officers Merritt and Jenkins still missing. Suppose United States naval court inquiry will be held to ascertain cause explosion. Hope our people will repress excitement and calmly await decision.

LEE.

Mr. Lee to Mr. Day.

HAVANA, *February 17.*

Merritt in junior officers' mess room. Jenkins in wardroom mess room at time explosion; latter left before an officer who was saved; must have gone wrong way. Lights out immediately; water rushing in. Merritt got to hatch with Naval Cadet Boyd. Ladder gone. Boyd climbed through and tried to pull Merritt up, but latter let go his hand, fell back, and was drowned. Bodies of these officers not found yet; probably in wreck. Sailors' funeral to-day at 3; will be immense procession.

LEE.

Mr. Lee to Mr. Day.

HAVANA, *February 18.*

Great popular demonstration at funeral yesterday; military, naval, firemen, and civil organizations generally represented. The bishop, General Parrado, second in command to Governor-General; autonomistic cabinet, civil governor, mayor, and other principal persons walked in procession part of route in accordance with custom to testify sympathy. Forty bodies buried. Many coming to surface water since, but now difficult to recognize, will be buried with religious services as collected.

LEE.

Mr. Lee to Mr. Day.

HAVANA, *February 18.*

Sigsbee begins to-morrow with divers sent to him from United States to recover all bodies still left in wreck *Maine*, as well as personal effects officers and men, and whatever else can be obtained that way. After that is completed the Spanish Government would like to unite with ours in having bottom of ship and harbor in vicinity jointly examined.

LEE.

[Telegrams.]

General Lee to Mr. Day.

HAVANA, *February 18, 1898.*

Seventy-three bodies *Maine* seamen in coffins awaiting burial in addition to forty buried yesterday.

General Lee to Mr. Day.

HAVANA, *February 21, 1898.*

Great need divers get effects and bodies from wreck; two now employed; twelve or fifteen could be used. One hundred and forty-three bodies buried. Very few found to-day. Over one hundred supposed to be confined in ship. Sailors now in two Spanish hospitals number eleven. Visited them yesterday; all will recover, except two; are comfortable and well cared for.

Mr. Lee to Mr. Day.

No. 777.] UNITED STATES CONSULATE-GENERAL,
Havana, February 18, 1898.

SIR: I have the honor to transmit herewith a translation of a communication from the Governor and Captain General, expressing sorrow for the loss of the *Maine.*

I am, sir, etc., FITZHUGH LEE,
Consul-General.

[Inclosure in No. 777.]

GENERAL GOVERNMENT OF THE ISLAND OF CUBA,
Havana, February 16, 1898.

MR. CONSUL: It becomes my painful duty to express to you my profound sorrow for the misfortune which occurred yesterday on board the American ship *Maine.* I associate myself with all my heart to the grief of the nation and of the families who have lost some of their members; and upon so doing I do not only express my personal sentiments, but I speak in the name of all the inhabitants of Havana—witnesses of the catastrophe which has afflicted so many homes.

God guard you many years.

RAMON BLANCO.

The CONSUL-GENERAL OF THE UNITED STATES.

[Telegram.]

Mr. Day to General Lee.

WASHINGTON, *February 19.*

The Government of the United States has already begun an investigation as to the causes of the disaster to the *Maine* through officers of the Navy especially appointed for that purpose, which will proceed independently. This Government will afford every facility it can to the Spanish authorities in whatever investigation they may see fit to make upon their part.

DAY.

[Telegram.]

General Lee to Mr. Day.

HAVANA, *February 22, 1898.*

Copper cylinders' ammunition found intact in 10-inch forward magazine, starboard side, this morning. Seems to show that magazine now exploded. Evidence beginning to prove explosion on port side by torpedo.

[Telegrams.]

General Lee to Mr. Day.

HAVANA, *February 25, 1898.*

Keyes was buried on 17th. Spanish law forbids exhumation bodies before expiration five years.

General Lee to Mr. Day.

HAVANA, *February 26, 1898.*

Most of the bodies buried. Some over week ago. Many unrecognizable. Against Spanish law to exhume until expiration of five years. Neither steamers nor authorities permit shipment bodies unless at once embalmed and in metallic cases. Cost between $600 and $800 each.

[Telegram.]

General Lee to Mr. Day.

HAVANA, *February 28, 1898.*

Arrangements made both Governments conduct independently investigation *Maine* disaster.

Mr. Lee to Mr. Day.

No. 782.] UNITED STATES CONSULATE-GENERAL,
Havana, February 28, 1898.

SIR: With reference to my telegram of this morning, which I now confirm, reading: "Arrangements made, both Governments conduct independently investigation *Maine* disaster," I now have the honor to transmit copies of the correspondence with this Government on the subject.

I am, sir, etc.,

FITZHUGH LEE,
Consul-General.

[Inclosure 1 in No. 782.]

GENERAL GOVERNMENT OF THE ISLAND OF CUBA,
OFFICE OF THE SECRETARY,
Havana, February 28, 1898.

In order to terminate the expediente (proceedings) of investigation initiated by the Spanish Government regarding the causes which produced the catastrophe of the *Maine*, it is only lacking to proceed to an examination of the exterior and interior part of the vessel where the explosion occurred, for which it is deemed indispensable for the better accomplishment of this object that our divers, upon performing the examination, be accompanied by those of the American Government; and inasmuch as no conclusive answer has been received from you to proceed to same, I beg you will please direct or request whoever it may concern to the effect that said divers join the Spanish divers for the purpose of making the report of the examination. I also beg to ask you to name a period of time as soon as possible.

God guard you many years.

Havana, February 25, 1898. RAMON BLANCO.

To the CONSUL-GENERAL OF THE UNITED STATES.

[Inclosure No. 2, with dispatch No. 782, Havana, February 28, 1898.]

UNITED STATES CONSULATE-GENERAL,
Havana, February 26, 1898.

o His Excellency the Governor-General of the Island of Cuba.

EXCELLENCY: I have the honor to acknowledge the receipt of your communication f the 25th instant. In reply I beg to inclose a copy of my telegram to the honrable Assistant Secretary of State at Washington in reference to the subject, and lso the Department's reply.

It would be observed that the United States Government thinks that the examinaons by the two Governments should proceed independently, but that every facility ıould be given to make whatever investigation your Government may see fit. I ill confer with Captain Sigsbee on the subject and suggest that he visit the imiral of the naval station, and I have no doubt that these two officers can agree pon a plan which would be satisfactory for all concerned.

I am quite sure that neither Government has any other object except to ascertain l the facts connected with the explosion of the *Maine*, and that the great desire of oth Governments is to proceed harmoniously with the work.

I am, etc.,

FITZHUGH LEE,
Consul-General.

C

TH CONGRESS, 2d Session. } SENATE. { DOCUMENT No. 231.

LIVES LOST BY THE SINKING OF U. S. BATTLE SHIP MAINE.

MESSAGE

FROM THE

RESIDENT OF THE UNITED STATES,

TRANSMITTING,

RESPONSE TO RESOLUTION OF THE SENATE OF APRIL 4, 1898, ETTER FROM THE SECRETARY OF THE NAVY INCLOSING EPORT OF THE CHIEF OF THE BUREAU OF NAVIGATION AS O NUMBER OF HUMAN LIVES LOST BY THE SINKING OF THE . S. BATTLE SHIP MAINE IN HAVANA HARBOR, CUBA, FEBRU-RY 15, 1898, ETC.

IL 12, 1898.—Read, referred to the Committee on Naval Affairs, and ordered to be printed.

the Senate of the United States:

n response to a resolution of the Senate of the 4th instant, I inclose ewith a letter from the Secretary of the Navy, inclosing a copy of a ort from the Chief of the Bureau of Navigation.

WILLIAM MCKINLEY.

EXECUTIVE MANSION, *April 12, 1898.*

NAVY DEPARTMENT,
Washington, April 9, 1898.

IR: I have the honor to acknowledge the receipt of Senate resolu-n of April 4, directing that the Senate be informed "of the total num-of human lives that were lost by the sinking of the U. S. battle p *Maine* in Havana Harbor, Cuba, on the 15th day of February, 8, the total number of dead bodies rescued from said ship, the total mber remaining unrescued, and what effort, if any, is being made rescue them," and in reply thereto inclose a copy of a report from Chief of the Bureau of Navigation covering the above inquiry.

have the honor to be, sir, very respectfully,

JOHN D. LONG, *Secretary.*

The PRESIDENT OF THE UNITED STATES SENATE.

Memorandum for the Secretary.

Number on board the U. S. S. *Maine* at the time of the disaster:		
Officers		26
Sailors		290
Marines		39
		355
Number saved:		
Officers	24	
Sailors	60	
Marines	11	
	95	
Number lost:		
Officers	2	
Sailors	230	
Marines	28	
	260	
		355
Bodies recovered:		
Officers		1
Sailors and marines		177
Died from injuries:		
Sailors and marines		8
		186
Of the number recovered there were buried—		
In the cemetery at Havana		166
At Key West		19
At Pittsburg, Pa. (officer)		1
		186
Number of bodies not recovered:		
Officers		1
Enlisted men and marines		73
		74

The work of recovery was continued until April 6, when the wrecking tugs were withdrawn, and nothing is now being done in that direction so far as is known, and the last bodies reported as recovered were sent to Key West on the 30th ultimo. No estimate has been made of the portions of bodies which were recovered and buried. The large percentage of bodies not recovered is due, no doubt, to the fact that the men were swinging in their hammocks immediately over that portion of the vessel which was totally destroyed.

A. S. CROWNINSHIELD,
Chief of Bureau.

BUREAU OF NAVIGATION,
Washington, D. C., April 8, 1898.

O

5TH CONGRESS, 2d Session. } SENATE. { DOCUMENT No. 232.

MARINE HOSPITALS AND QUARANTINE STATIONS.

'RIL 12, 1898.—Referred to the Committee on Appropriations (to accompany S. R. 140) and ordered to be printed.

Mr. GALLINGER presented the following

ST OF MARINE HOSPITALS AND QUARANTINE STATIONS IN THE UNITED STATES.

There are in the United States 22 marine hospitals and 11 United ates quarantine stations. The marine hospitals are located as lows:

Location.	Capacity of hospital.	Location.	Capacity of hospital.
timore, Md	100	Mobile, Ala	40
ton, Mass	150	New Orleans, La	100
ro, Ill	65	New York, N. Y	200
cago, Ill	200	Portland, Me	50
cinnati, Ohio	75	Port Townsend, Wash	60
veland, Ohio	50	San Francisco, Cal	140
roit, Mich	75	St. Louis, Mo	100
nsville, Ind	50	Vineyard Haven, Mass	40
r West, Fla	50	Wilmington, N. C	20
isville, Ky	50	Hospital and barracks at Cape Charles Quarantine	1,000
pital and barracks at Delaware reakwater	1,000		
nphis, Tenn	65	Total	3,680

The United States quarantine stations are located as follows:

Reedy Island Quarantine, via Port Penn, Del.
Delaware Breakwater Quarantine, Lewes, Del.
Cape Charles Quarantine, Fort Monroe, Va.
Cape Fear Quarantine, Southport, N. C.
South Atlantic Quarantine, via Inverness, Ga.
Brunswick Quarantine, Brunswick, Ga.
Tortugas Quarantine, via Key West, Fla.
Gulf Quarantine, via Biloxi, Miss.
San Diego Quarantine, San Diego, Cal.
San Francisco Quarantine, Angel Island, Cal.
Port Townsend Quarantine, Port Townsend, Wash.

These Government hospitals are all in commission, having a full com- ement of officers and attendants and equipped with the best ward rniture, modern aseptic outfit for operating rooms, ambulances, etc. ie nurses are trained, and the hospital discipline is similar to that in my and navy hospitals. The commissioned corps of medical officers mprises 16 surgeons, 32 passed assistant surgeons, and 22 assistant rgeons.

In case war was declared the restrictions which would be placed on the merchant marine of the United States would greatly reduce

the number of patients from merchant vessels eligible to relief in United States marine hospitals and permit of the reception of a large number of sick or wounded soldiers or sailors from the Army and Navy.

If necessary, temporary ward extensions could be made to many of the Southern hospitals with little expense, which would increase the hospital capacity. Temporary hospitals could also be erected upon some of the quarantine reservations, so isolated as to render them safe to troops who might be sent there. Patients suffering from protracted malarial diseases could be sent to the hospitals North, where the climate would benefit them, and those suffering from acute diseases or injuries requiring immediate attention could be provided for in the hospitals located upon the Gulf and South Atlantic coast. In case troops are landed in Cuba or sent South during the summer, there will be many who will become disabled from fevers incident to climate and exposure, who will require hospital treatment.

If the United States marine hospitals are to be used for the reception of soldiers and naval sailors, there must be a law authorizing this to be done, and determining the relative rank of commissioned officers of the Marine-Hospital Service with that of the medical officers of the Army and Navy with whom they serve, to promote the proper administration of hospitals while they are thus used. Officers of the Marine-Hospital Service are now detailed upon United States revenue cutters, which, in times of war, are auxiliary to the naval force, and the United States Statutes provide for the relative rank of the commissioned officers of the Revenue-Cutter Service with officers of the Navy while serving with them as an auxiliary to the naval force.

O

55TH CONGRESS, 2d Session. } SENATE. { DOCUMENT No. 233.

MEMORIAL FROM THE NATIONAL PURE FOOD AND DRUG CONGRESS.

APRIL 12, 1898.—Referred to the Committee on Agriculture and Forestry and ordered to be printed.

Mr. FAULKNER presented the following

MEMORIAL FROM THE NATIONAL PURE FOOD AND DRUG CONGRESS THAT ASSEMBLED IN THE CITY OF WASHINGTON, D. C., MARCH 2, 1898, REPRESENTING TWENTY-ONE NATIONAL ORGANIZATIONS, AND OVER ONE HUNDRED AND FIFTY STATE AND LOCAL ORGANIZATIONS, FAVORING LEGISLATION FOR THE PREVENTION OF THE ADULTERATION OF FOOD, DRUGS, ETC., IN THE DISTRICT OF COLUMBIA AND THE TERRITORIES.

MEMORIAL OF THE NATIONAL PURE FOOD AND DRUG CONGRESS.

To the Congress of the United States:

Your petitioners respectfully recite:

That there assembled in the city of Washington, D. C., on the 2d of March, 1898, in response to a call for a National Pure Food and Drug Congress, representatives of twenty-one national organizations, over one hundred and fifty State and local organizations, and delegates appointed by the governors of many of the States and Territories, and by the Commissioners of the District of Columbia, the Secretary of Agriculture, the Commissioner of Internal Revenue, the Commissioner of Fish and Fisheries, and the Surgeon-Generals of the Army, Navy, and the Marine-Hospital Service.

That, in view of the widespread practice of adulteration and fraudulent representation of drugs and, in greater degree, of foods in the United States, menacing the health and purses of the poorer classes especially, and inflicting enormous losses upon honest producers and dealers, as well as upon consumers; and in view of the further fact, well established by the experience of some years, that the several States are unable by their own police regulations alone to protect their citizens from such practice in the commerce between the several States and with foreign countries, the delegates assembled resolved to form a permanent organization, and set forth their purposes in the following

declaration, to which they ordered their several names and representative relations to be subscribed:

OBJECTS OF THE PURE FOOD AND DRUG CONGRESS.

The object of this Congress is to secure suitable legislation of a national character to prevent the adulteration of food, drinks, and drugs, and to secure the enforcement of such laws; to secure and promote uniformity in State legislation and in the rulings of the State departments.

To create and maintain a high public sentiment upon these important subjects and to uphold and sustain all public officers charged with the enforcement of such regulations.

To promote a more general intelligence concerning the injury to health and to the business interests of honest producers, manufacturers, dealers, and exporters resulting from food adulteration, and concerning the importance of proper food, pure and properly prepared, to the health of the people.

And to this end we ask the cooperation of every one interested in the promotion of sound public morals and in the protection of the public health.

That, after careful consideration by these delegates, representing the various agricultural, manufacturing, commercial, medical, and scientific bodies, and the national and State governmental bodies whose names are hereunto subscribed, the following bill was agreed upon as best fitted, under existing conditions, to give to these several interests the protection they need, so far as commerce in the Territories and the District of Columbia and between the several States and with foreign countries is concerned.

The enactment of this measure is hereby earnestly urged upon your honorable body.

THE PURE FOOD CONGRESS BILL.

IN THE HOUSE OF REPRESENTATIVES

MARCH 15, 1898.

Mr. Brosius introduced the following bill; which was referred to the Committee on Interstate and Foreign Commerce and ordered to be printed.

A BILL for preventing the adulteration, misbranding, and imitation of foods, beverages, candies, drugs, and condiments in the District of Columbia and the Territories, and for regulating interstate traffic therein, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That for the purpose of protecting the commerce in food products and drugs between the several States and in the District of Columbia and the Territories of the United States and foreign countries the Secretary of Agriculture shall organize in the Chemical Division of the Department of Agriculture a food, beverage, and drug section, and make necessary rules governing the same to carry out the provisions of this act, under direction of the Chief Chemist, whose duty it shall be to procure from time to time, under rules and regulations to be prescribed by the Secretary of Agriculture and analyze or cause to be analyzed or examined, microscopically or otherwise, samples of foods, beverages, condiments, and drugs offered for sale in any State, District of Columbia, or Territory other than where manufactured, or from a foreign country, provided the same be in original or unbroken packages. The Secretary of Agriculture is hereby authorized to employ such chemists, inspectors, clerks, laborers, and other employees as may be necessary to carry out the provisions of this act, and to make such publication of the results of examinations, analyses, and so forth, as he may deem proper.

SEC. 2. That the introduction into any State or Territory or the District of Columbia from any other State or Territory or the District of Columbia or foreign country of any article of food, drugs, or condiments which is adulterated or misbranded within the meaning of this act is hereby prohibited, and any person who shall ship or deliver for shipment from any State or Territory or the District of Columbia or foreign country to any other State or Territory or the District of Columbia or to a foreign country, or who shall receive in any State or Territory or the District of Columbia from any other State or Territory or the District of Columbia or foreign country, or who, having received, shall deliver, for pay or otherwise, or offer to

deliver to any other person, in original unbroken packages, any such article so adulterated or misbranded within the meaning of this act, or any person who shall sell or offer for sale in the District of Columbia or the Territories of the United States such adulterated, mixed, misbranded, or imitated foods, beverages, condiments, or drugs shall be guilty of a misdemeanor, and for such offense be fined not exceeding two hundred dollars for the first offense and for each subsequent offense not exceeding three hundred dollars, or be imprisoned not exceeding one year, or both in the discretion of the court.

SEC. 3. That the chief chemist shall make, or cause to be made, under rules and regulations to be prescribed by the Secretary of Agriculture, examinations of specimens of food, beverages, condiments, and drugs offered for sale in original or unbroken packages in any State or Territory other than where manufactured or from any foreign country, which may be collected from time to time, under rules and regulations to be prescribed by the Secretary of Agriculture, and under his direction, in various parts of the country. If it shall appear from such examination that any of the provisions of this act have been violated the Secretary of Agriculture shall at once certify the facts to the proper United States district attorney, with a copy of the results of the analysis duly authenticated by the analyst under oath.

SEC. 4. That it shall be the duty of every district attorney to whom the Secretary of Agriculture shall report any violation of this act to cause proceedings to be commenced and prosecuted without delay for the fines and penalties in such case provided.

DEFINITIONS.

SEC. 5. That the term "drug," as used in this bill, shall include all medicines recognized in United States Pharmacopœia and National Formulary and cosmetics for internal or external use. The term "food," as used herein, shall include all articles used for food, candy, drink, or condiment by man or domestic animals, whether simple, mixed, or compound. The term "misbranded," as used herein, shall include all drugs, or articles of food, or articles which enter into the composition of food or condiments the package or label of which shall bear any statement purporting to name any ingredients or substances as not being contained in such article, which statement shall be false in any particular; or any condiment or food product which is falsely branded as to the State or Territory in which it is manufactured or produced.

ADULTERATIONS.

SEC. 6. That for the purposes of this act an article shall be deemed to be adulterated—

In case of drugs:

First. If, when a drug is sold under or by a name recognized in the United States Pharmacopœia, it differs from the standard of strength, quality, or purity, according to the tests laid down in the United States Pharmacopœia, official at the time of the investigation.

Second. If, when sold under or by a name not recognized in the United States Pharmacopœia, but which is found in the National Formulary, it differs from the standard of strength, quality, or purity, according to the tests laid down in said work.

Third. If its strength or purity fall below the professed standard under which it is sold.

Fourth. If it be an imitation of and sold under the specific name of another article.

In the case of food, candy, or drink:

First. If any substance or substances has or have been mixed and packed with it so as to reduce or lower or injuriously affect its quality or strength, so that such product, when offered for sale, shall deceive or tend to deceive the purchaser.

Second. If any inferior substance or substances has or have been submitted wholly or in part for the article, so that the product, when sold, shall deceive or tend to deceive the purchaser.

Third. If any valuable constituent of the article has been wholly or in part abstracted, so that the product, when sold, shall deceive or tend to deceive the purchaser.

Fourth. If it be an imitation of and sold under the specific name of another article.

Fifth. If it be mixed, colored, powdered, or stained in a manner whereby damage or inferiority is concealed, so that such product, when sold, shall deceive, or tend to deceive, the purchaser.

Sixth. If it contain any added poisonous ingredient or any ingredient which may render such article injurious to the health of the person consuming it.

Seventh. If it be labeled or branded so as to deceive or mislead the purchaser, or purport to be a foreign product, when branded so, or is an imitation, either in package or label, of an established proprietary product which has been trade-marked or patented.

Eighth. If it consists of the whole or any part of a diseased, filthy, decomposed, or putrid animal or vegetable substance, or any portion of an animal unfit for food, whether manufactured or not, or if it is the product of a diseased animal, or of an animal that has died otherwise than by slaughter.

Ninth. That candies of domestic manufacture and chocolate of domestic manufacture may be deemed to be adulterated if they contain terra alba, barytes, talc, chrome yellow, or other mineral substances or poisonous colors or flavors, or other ingredients deleterious or detrimental to health: *Provided*, That an article of food, beverage, condiment, or drug which does not contain any added poisonous ingredient shall not be deemed to be adulterated in the following cases: First. In the case of mixtures or compounds which may be now or from time to time hereafter known as articles of food, beverages, or condiments, under their own distinctive names, and not included in definition fourth of this section. Second. In the case of articles labeled, branded, or tagged so as to plainly indicate that they are mixtures, compounds, combinations, imitations, or blends. Third. When any matter or ingredient has been added to the food, beverage, or condiment, because the same is required for the production or preparation thereof as an article of commerce in a state fit for carriage or consumption, and not fraudulently to increase the bulk, weight, or measure of the food, beverage, or condiment, or conceal the inferior quality thereof: *Provided*, That the same shall be labeled, branded, or tagged, as prescribed by the Secretary of Agriculture, so as to show them to be compounds, and the exact character thereof: *And provided further*, That nothing in this act shall be construed as requiring or compelling proprietors or manufactures of proprietary foods to disclose their trade formulas, except in so far as the provisions of this bill may require to secure freedom from adulteration or imitation. Fourth. Where the food, beverage, condiment, or drug is unavoidably mixed with some harmless extraneous matter in the process of collection or preparation: *Provided further*, That no retailer shall be convicted under the provision of this act when he is able to prove a written guaranty of purity, in a form approved by the Secretary of Agriculture, as published in his rules and regulations, signed by the wholesaler, jobber, manufacturer, or other party from whom he purchased said articles. Said guaranty shall contain the full name and address of the party or parties making the sale to the retailer, and said party or parties shall be amenable to the prosecutions, fines, and other penalties which would attach in due course to the retailer under the provisions of this act.

SEC. 7. That the Secretary of Agriculture is hereby authorized to cause all compound, mixed, or blended products to be properly branded and prescribe how this shall be done.

SEC. 8. That it shall be the duty of the Secretary of Agriculture to call upon the Association of Official Agricultural Chemists and such physicians, not less than five, as the President of the United States shall select from the Medical Department of the Army, the Navy, and the United States Marine Hospital, and five chemists to be selected by the American Chemical Society, to determine jointly the standard of all food products (within the meaning of this act), and when so determined such standards shall guide the chemists of the Department of Agriculture in the performance of the duties imposed upon them by this act, and shall remain the standards before all courts. It shall be the duty of the Association of Official Agricultural Chemists and the medical officers before mentioned to confer with and consult the duly accredited representatives of all industries for which standards shall be established under the provisions of this act.

SEC. 9. That every person who manufactures for shipment and delivers for transportation from any State, Territory, or the District of Columbia any drug, condiment, beverage, or article of food, and every person who exposes for sale or delivers to a purchaser any drug, condiment, beverage, or article of food received from a State, Territory, or the District of Columbia other than the State, Territory, or the District of Columbia in which he exposes for sale or delivers such drug, beverage, or article of food, and which article is in the original unbroken package in which the same was received, shall furnish within business hours and upon tender and full payment of the selling price a sample of such drugs, condiments, beverages, or articles of food to any person duly authorized by the Secretary of Agriculture to receive the same, and who shall apply to such manufacturer, or vender, or person delivering to a purchaser such drug, beverage, or article of food such sample for such use in sufficient quantity for the analysis of any such article or articles in his possession. And in the presence of such dealer and an

agent of the Department of Agriculture, if so desired by either party, said sample shall be divided into three parts, and each part shall be sealed by the seal of the Department of Agriculture. One part shall be left with the dealer, one delivered to the chemist of the Department of Agriculture, and one deposited with the United States district attorney for the district in which the sample is taken. Said manufacturer or dealer may have the sample left with him analyzed at his own expense, and if the results of said analysis differ from those of the chemist of the Department of Agriculture, the sample in the hands of the district attorney shall be analyzed at the expense of the said manufacturer or dealer by a third chemist, who shall be appointed by the president of the Association of Official Agricultural Chemists of the United States, and the analysis shall be conducted in the presence of the chemist of the Department of Agriculture and the chemist representing the dealer, and the whole evidence shall be laid before the court.

SEC. 10. That any manufacturer or dealer who refuses to comply upon demand with the requirements of section nine of this act shall be guilty of a misdemeanor, and upon conviction shall be fined not exceeding one hundred nor less than ten dollars, or imprisoned not exceeding one hundred nor less than thirty days, or both. And any person found guilty of manufacturing, or offering for sale, or selling an adulterated, impure, or misbranded article of food, condiment, or drug in violation of the provisions of this act shall be adjudged to pay, in addition to the penalties heretofore provided for, all the necessary costs and expenses incurred in inspecting and analyzing such adulterated articles which said person may have been found guilty of manufacturing, selling, or offering for sale.

SEC. 11. That this act shall not be construed to interfere with commerce wholly internal in any State, nor with the exercise of their police power by the several States.

SEC. 12. That any article of food, condiment, or drug that is adulterated within the meaning of this act, and is transported, or is being transported, from one State to another for sale, or if it be sold or offered for sale in the District of Columbia and the Territories of the United States, shall be liable to be proceeded against in any district court of the United States within the district where the same is found, and seized for confiscation, by a process of libel for condemnation. And if such article is condemned as being adulterated, the same shall be disposed of as the said court may direct, and the proceeds thereof, if sold, less the legal costs and charges, shall be paid into the Treasury of the United States. The proceedings in such libel cases shall conform, as near as may be, to proceedings in admiralty, except that either party may demand trial by jury of any issue of fact joined in such case, and all such proceedings shall be at the suit of and in the name of the United States.

That resolutions favoring a measure upon which the above bill was modeled were passed by the following important bodies:

By the National Grange, Patrons of Husbandry, in November, 1897;

By the Association of Official Agricultural Chemists of the United States on the 29th day of October, 1897;

And by the National Farmers' Congress.

The names, residences, and representative relations of your petitioners are hereunto subscribed:

Joseph E. Blackburn, president, dairy and food commissioner, Columbus, Ohio.
Frank Hume, first vice-president, wholesale grocer, Washington, D. C.
Alex. J. Wedderburn, corresponding secretary (G), master State Grange of Virginia, P. O. box 464, Washington, D. C.
Franklin Dye, recording secretary, secretary State board of agriculture, Trenton, N. J.
Robert N. Harper, treasurer, president District of Columbia Pharmaceutical Association, Washington. D. C.

EXECUTIVE COMMITTEE.

William Frear, Ph. D., chemist State College, Pennsylvania, chairman.
W. S. Thompson, pharmacist, Washington, D. C.
W. A. Withers, State chemist, Raleigh, N. C.
T. N. Jamieson, druggist, Chicago, Ill.
Jas. A. Mount, governor, Indianapolis, Ind.

N. J. Batchelder, chairman executive committee National Grange, P. of H., cord, N. H.
F. J. H. Kracke, assistant commissioner of agriculture, New York, N. Y.

NATIONAL ORGANIZATIONS REPRESENTED.

National Confectioners' Association.
National Millers' Association.
Northwestern Millers' Association.
American Chemical Society.
United States Brewers' Association.
Fishing Industries.
United States Bee Keepers' Union.
Official Agricultural Chemists.
National Creamery and Butter Makers' Association.
National Grange, P. of H.
Vital Friends.
Women's Christian Temperance Union.
National Pure Food Association.
Medical and Surgical Association.
National Association Dairy and Food Departments.
United States Export Association.
National Wholesale Grocers' Association.
National Retail Grocers' Association.
National Farmers' Congress.
National Bee Keepers' Union.
National Peace Congress.

GOVERNMENTAL DEPARTMENTS REPRESENTED.

DEPARTMENT OF AGRICULTURE.

J. H. Brigham, Assistant Secretary.
D. E. Salmon, Chief of Bureau of Animal Industry.
H. W. Wiley, Chief of Division of Chemistry.
Henry E. Alvoid, Chief of Dairy Division.
W. M. King. Statistical Division (Special Cereal Inquiry).
Alternates:
Frederick V. Coville, Chief of Division of Botany.
A. D. Melvin, Chief of Inspection Division, B. A. I.
Wm. A. Taylor, Assistant Chief Division of Pomology.

INTERNAL REVENUE DEPARTMENT.

Mr. Wilson, Internal Revenue Bureau, Washington.
Mr. Bowen, Internal Revenue Bureau, Washington.
J. B. T. Tupper, Internal Revenue Bureau, Washington.
C. A. Bates, Internal Revenue Bureau, Washington.
C. A. Crampton, Internal Revenue Bureau, Washington.

SURGEON-GENERAL OF THE NAVY.

Chas. H. White, U. S. N., medical director in charge of the United States Museum of Hygiene.
James M. Flint, U. S. N., medical director Smithsonian Institution, the "Po

SURGEON-GENERAL OF THE ARMY.

Chas. H. Alden (Colonel), Assistant Surgeon-General, U. S. A., Surgeon-G Office, Washington.
Wm. H. Forwood (Colonel), Assistant Surgeon-General, U. S. A., attending Soldiers' Home, Washington.
Chas. Smart (Lieutenant-Colonel), Deputy Surgeon-General, U. S. A., S General's Office, Washington.
Jas. C. Merrill (Major), chemist, Surgeon-General's Office, Washington.
W. M. Mew, M. D., chemist, Surgeon-General's Office, Washington.

MARINE-HOSPITAL SERVICE.

J. J. Kinyoun, passed assistant-surgeon, Marine-Hospital Service, Washingto
Chas. E. Banks, surgeon, Marine-Hospital Service, Washington.

U. S. FISH COMMISSION.

/. de C. Ravenel, Washington.
ient. Robert Platt, Washington.
W. Evermann, Washington.
H. Townsend, Washington.
H. Dunlap, Washington.

APPOINTMENTS MADE BY THE COMMISSIONERS, DISTRICT OF COLUMBIA.

ank Hume, wholesale grocer, Washington, D. C.
D. Hird, chemist, Washington.
N. Harper, president District of Columbia Pharmaceutical Association, Washington.
riah Wilkins, editor Post, Washington.
lliam Tindall, secretary Board of Commissioners, Washington.
C. Woodward, M. D., health officer, Washington.
G. Davis, collector, Washington.
eodore W. Noyes, editor Star, Washington.
lson Hutchins, editor Times, Washington.
orge H. Harries, secretary Board of Trade, Washington.
tthew Trimble, assessor, Washington.
F. Oyster, wholesale butter dealer, Washington.
bert B Tenney, Washington.
J. Mayer, Washington.
nes L. Norris, Washington.
orge M. Kober, M. D., Washington.
F. Blount (Colonel), Washington.
lliam Saunders, superintendent garden and grounds, Department of Agriculture, Washington.

DISTRICT OF COLUMBIA.

N. Stokes, M. D., president Chemical Society, Geological Survey.
M. Whitney, cider and vinegar manufacturer, Washington.
M. Whitney, cider and vinegar manufacturer, Washington.
ratio Browning, Wholesale Grocers' Association, Washington.
H. Shea, Wholesale Grocers' Association, Washington.
o. J. Mueller, confectioner, Washington.
ward Graves, of Havener's Baking Company, Washington.
n. Neuland, hotel and restaurant, Washington.
orge N. Acker, M. D., Washington.
. S. Thompson, American Ph. Association, Washington.
as. E. Munroe, M. D., American Chemical Society, Washington.
. H. Seamen, M. D., Chemical Society, United States Patent Office, Washington.
nry H. Johnston, Washington.
hn H. Magruder, retail grocer, Washington.
B. G. Custis, M. D., Washington Board of Trade.
L. Hilton, 1033 Twenty-second street, president National College of Pharmacy, Washington.
muel C. Busey, M. D., Washington Board of Trade.
. D. Bigelow, Washington Chemical Society, Department of Agriculture.
W. Glazebrook, M. D., 2022 P street, Medical Society, Washington.
Wythe Cook, M. D., Medical Society, 3 Thomas circle, Washington.
lva Lockwood, Vital Friends and National Peace Congress, Washington.
ank Madigan, 1206 Virginia avenue SW., Washington, brewer.
Sullivan, Washington, brewer.
. Jarvis, 426 Ninth street NW., Washington, candy manufacturer.
F. Sheetz, 732 Seventh street NW., Washington, candy manufacturer.
. S. Sammons, 612 Q street NW., Washington, chemical manufacturer.
S. Grove, Washington, cider manufacturer.
merset Waters, Washington, wholesale grocer.
B. Earnshaw, Washington, wholesale grocer.
C. Ergood, Washington, wholesale grocer.
os. J. Mayer, Washington, flour manufacturer.
lph L. Galt, Washington, flour manufacturer.
mes H. Welsh, of W. M. Galt & Co., Washington.
L. Jordan, 519 Ninth street NW., President Retail Liquor Dealers' Association.
illiam Maguire, 1500 Seventh street NW., retail liquor dealer.
lliam Whelan, Washington, retail liquor dealer.

Chr. Xander, Seventh street, between I and K, wines and liquors.
F. Pohrdorff, 909 Seventh street, Washington, wines and liquors.
William Muehlison, Washington, wholesale liquor dealer.
Dr. E. A. DeSchweintz, Chief Chemist, Bureau of Animal Industry, District Columbia Chemical Society.
F. M. Chriswell, 1901 Seventh street, Washington Pharmaceutical Society.
W. G. Duckett, Pennsylvania avenue and Twenty-second street, Washington Pharmaceutical Society.
John T. Winter, M. D., 719 Mount Vernon place, Washington Pharmacy Board.
W. P. Carr, M. D., Washington Pharmacy Board.
S. L. Hilton, 1033 Twenty-second street, College of Pharmacy.
H. C. Easterday, New Jersey avenue and G street, Washington College of Pharmacy.
H. L. Biscoe, Tenth Street wharf, Washington.
Walter Burton, National Hotel, Washington.
W. H. Selden, Metropolitan Hotel, Washington.
C. M. Souissa, secretary Washington Wholesale Grocers' Association.

ALABAMA.

J. H. G. Martin, Kellog Building, Washington (G).

CALIFORNIA.

William M. C. Ramsey, Santa Paula (G).
C. A. Barlow (M. C.), Washington, D. C., California State Alliance.
E. M. Wardell, 513 B street NE., Washington, D. C., California State Alliance.

COLORADO.

Alex. J. Wedderburn, of Virginia, representing Colorado State Bee Keepers' Association.

CONNECTICUT.

J. B. Noble, dairy commissioner, Hartford.
R. O. Eaton, deputy dairy commissioner, New Haven.
George L. McLean, State inspector of factories, Ellington.
J. D. Walter, New Haven County commissioner, Cheshire.
Henry M. Bishop, secretary State board of pharmacy, New Haven.

DELAWARE.

John T. Almond, manufacturer, Wilmington (G).
Z. James Belt, wholesale and retail druggist, Sixth and Market streets, Wilmington (G).

FLORIDA.

John W. Trammel, superintendent State insane asylum, Chattahoochee (G).

GEORGIA.

E. W. Allen, Experiment, experiment station.
H. C. White, Athens, president of College of Agriculture and vice-director of experiment station.
Montgomery Cummings, Washington, D. C., Georgia Dairymen's Association.

ILLINOIS.

H. L. Hampton, retail grocer, Springfield (G).
Albert E. Ebert, Chicago, American Pharmaceutical Association.
Louis Lehman, 1229 North Halstead street, Chicago, chairman Illinois Pharmaceutical Association.
W. Bodemann, Lake avenue and Fiftieth street, Chicago Apothecaries' Club.
J. A. Egan, M. D., Springfield, secretary State Board of Health.
H. H. Green, Pharmacist, Bloomington (G).
Fred M. Schmidt, Schiller Building, Chicago, president board of pharmacy.
T. N. Jamieson, druggist, Chicago.
P. H. Eisenmayer, Murphysboro, Southern Illinois Milling Company.
Miss Emma C. Sickles, 2939 Wabash avenue, Chicago, chairman domestic science committee, National Farmers' Congress.
F. C. Johnson, Kishwaukee, cider and vinegar manufacturer (G).
T. W. Ruekheim, Chicago, manufacturing confectioner.

IDAHO.

Robert Mulleken, secretary horticultural society, Nampa.

INDIANA.

aron Jones, master of National and State Grange, South Bend (G).
V. J. Fairfield, M. D., secretary board of health, representing Commercial Club, Anderson.

IOWA.

ugene Secor, general manager and treasurer United States Bee Keepers' Union, Forest City.

KANSAS.

homas Ryan, Assistant Secretary of Interior, Washington, D. C.
ommercial Club of Topeka.

KENTUCKY.

B. Gilbert, M. D., medical society, Louisville.
W. Taylor, M. D., medical society, Louisville.

MARYLAND.

am J. Gosman, M. D., druggist and manufacturer, 346 North Charles street, Baltimore (G).
arles E. Coffin, manufacturer and farmer, Muirkirk (G).
B. McDonnell, College Park, State chemist.
M. Nesbit, College Park (G).
bert E. Thompson, druggist, 101 North Charles street, Baltimore (G).
arles Caspari, Baltimore, secretary American Pharmaceutical Association (G).
J. Patterson, College Park, Agricultural and Mining College and Experiment Station.
rdan Stabler, corner Madison and Eutaw streets, Baltimore (G).
W. Lehman, Ph. D., Baltimore, chemist, board of health.
G. Welch, M. D., College Park, Agricultural College and Experiment Station.
s. B. Ager, Hyattsville, master State Grange, representative National Grange.
Enos Ray, Chillium, lecturer State Grange.
illiam B. Sands, Baltimore, secretary State Grange.
illiam Powell, manufacturer and farmer, Baltimore (G).
arles E. Dohme, Baltimore, American Pharmaceutical Association.
orge G. McGaw, North Charles street, Baltimore (G).
W. Sylvester, president Agricultural and Mining College, College Park (G).
H. Brinkley, College Park, experiment station.

MASSACHUSETTS.

ram H. Logan, 202 State street, Boston, Boston Wholesale Grocers' Association and (G).
D. Perky, 57 Jackson street, Worcester (G).
. C. Jewitt, Worcester, master State Grange.
C. Dowse, editor N. E. Grocer, Boston (G).
F. Carpenter, Somerville, ex-president Retail Grocers' Association (G).
alter M. Lowney, Boston, National Confectioners' and N. E. Confectioners' Associations.
rion A. McBride, 316 Bigelow street, Cambridge, National W. C. T. U., Domestic Science Branch.
s. H. Wright, Boston, Boston Retail Grocers' Association.
s. Morrison, Boston, Boston Retail Grocers' Association.
orge O. Robinson, Boston.
Elliott Smith, Boston.
hn Connor, Boston.
L. Grave, Boston.
thur W. Brigham, Boston.
nry H. Goodell, Amherst, president State Agricultural College and director experiment station.

NEW HAMPSHIRE.

N. J. Bachelder, Concord, master State Grange, chairman executive committee of National Grange, P. of H.
Wm. J. Reid, Parkhill (G.).

OREGON.

Edmund Gilter, Salem (G.).
Jas. B. Montgomery, Portland (G.).

OHIO.

Orrin Thacker, secretary Wholesale Grocers' Association, Columbus.
F. W. Herbst, drug inspector of food and drug commissioner, Columbus.
J. E. Blackburn, dairy and food commissioner, Columbus, and president of National Association Dairy and Food Departments.
J. H. Beal, Ohio State Pharmaceutical Association, Scio.
J. A. Miller, secretary Ohio Brewers' Association, Cincinnati.
D. L. Sleeper, chief counsel dairy and food commissioner, Columbus.

OKLAHOMA.

D. F. Flynn, Guthrie (G).
William Grimes, Kingfisher (G).

PENNSYLVANIA.

John McClurg, Pittsburg, manufacturing confectioner.
Crisby Gray, Pittsburg, superintendent bureau of health.
A. H. Edwards, Pittsburg, meat, milk, and food inspector.
Frank Moore, North Orwell State Grange.
Frank P. Hendley, 117 Callowhill street, Philadelphia, wholesale grocer.
Hon. Thomas J. Edge, Harrisburg, secretary of agriculture (G).
John Hamilton, Harrisburg, deputy commissioner of agriculture.
A. S. Deeter, 144 Pennsylvania street, Reading, president Retail Grocers' Association.
Albert Kaiser, 1653 Passayunk avenue, Philadelphia Retail Grocers' Association.
D. S. Krieble, grocer, Germantown, Philadelphia.
O. H. Henry, grocer, Germantown, Philadelphia.
P. McGinty, Philadelphia.
Joseph H. Scott, Philadelphia.
Leonard Rhone, Center Hall, master State Grange (G).
Edward Hart, editor Journal, Easton, American Chemical Society.
William Frear, Ph. D., State College chemist, department of agriculture.
Will B. Powell, importer and breeder of blooded stock, Shadeland.
Mrs. E. S. Starr, dairy editress Public Ledger, Philadelphia, appointed by dairy and food commissioner.
William R. Warner, 1228 Market street, Philadelphia, proprietary manufacturer.
M. N. Kline, pharmacist. Philadelphia Board of Trade.
Thomas Martindale, retail grocer, 941 Market street, Philadelphia.
John F. Patton, York, American Pharmaceutical Association.
E. A. Cornell, Williamsport, State board of pharmacy.
Louis Emanuel, pharmacist, 177 Second avenue, Pittsburg.
Charles T. George, M. D., Harrisburg, State board of pharmacy.
Felix A. Boericke, pharmacist, 1011 Arch street, Philadelphia.
Henry C. Porter, Towanda, State board of pharmacy.
Robert P. Duff, Pittsburg Chamber of Commerce.
Jas. H. McGrath, 1009 Oxford street, Philadelphia, Philadelphia Retail Grocers' Association.
Jason Sexton, Springhouse, farmer (G).
Levi Wells, Harrisburg, dairy and food commissioner.
Louis Burk, 1214 North Third street, Philadelphia, pork packer.
George C. Hutchinson, Warriorsmark, National Association Dairy and Food Department of the United States.
C. B. Tappan, Philadelphia, Retail Grocers' Association.
George C. Groff, M. D., Lewisburg, State board of health (G).
Jos. P. Remington, Philadelphia, College of Pharmacy (G).
Jacob H. Redsecker, Lebanon Pharmaceutical Association.

SOUTH CAROLINA.

A. C. Latimer, Washington, D. C.

UTAH.

Frank Benton, Department of Agriculture, Washington, D. C., representative Utah State Bee Keepers' Association.

VIRGINIA.

C. C. Mercer, Hamilton, agriculturists (G).
J. A. Jefferies, Warrenton, druggists (G).
John Thompson Brown, Bedford, board of visitors, A. and M. College.
J. W. Walter, University of Virginia, professor of chemistry.
Arthur Jordan, M. D., Richmond, Academy of Medicine and Surgery (G).
J. W. Henson, M. D. (G).
Richard H. Gaines, Richmond, State chemist, Department of Agriculture.
Geo. F. Harrison, farmer, Chantilla (G).
Capt. H. L. Salsbury, Merrifield, State grange.
Samuel H. Lunt, Alexandria (G).
Wm. M. King, Glencarlyn, Agricultural Department.
Alex. J. Wedderburn, Fairfax County (G), master State Grange and representative Colorado Bee Keepers' Association.
E. F. Golson, Somerset (G).
M. E. Church, Falls Church, State Pharmaceutical Association.
O. E. Hine, Vienna, State Board of Agriculture.
Professor Mallett, Charlottesville, American Pharmaceutical Society.
F. Ashby Miller, Richmond, American Pharmaceutical Association and Virginia Pharmaceutical Association.

WISCONSIN.

A. H. Hollister, Madison, State Board of Pharmacy.
Jessie Birmingham, Abrams (G).
William Larsen, proprietor Wm. Larsen's Canning Company, Green Bay (G).
U. O. B. Wingate, M. D., secretary Board of Health, Milwaukee.
F. Barry, secretary Millers' National Association, Milwaukee.

WEST VIRGINIA.

John H. Ruhl, Clarksburg (G).
L. L. Loar, retail grocer, Grafton (G).
John H. Grimm, druggist, Parksburg (G).
I. W. Gall, Treasury Department, Washington, D. C. (G).

LOCAL ADVISORY COMMITTEE.

Frank Hume, chairman, wholesale grocer, Washington, D. C.
Matthew Trimble, first vice chairman, assessor of District of Columbia.
Wm. C. Woodward, second vice chairman, health officer.
R. N. Harper, treasurer, president District of Columbia Pharmaceutical Association.
J. D. Hird, chemist of District of Columbia.
Beriah Wilkins, editor Washington Post.
J. F. Oyster, wholesale butter dealer.
Alex. J. Wedderburn, secretary.

ACTION BY EXECUTIVE COMMITTEE.

The executive committee of the National Pure Food and Drug Congress met in the city of Washington on the 21st day of March, 1898, and directed that the foregoing memorial be sent to the Congress of the United States.

WM. FREAR, *Chairman.*
FRANKLIN DYE, *Secretary.*

ACTION OF THE NATIONAL GRANGE, PATRONS OF HUSBANDRY.

Farmers have been greatly benefited by State legislation in the interest of pure food, but there seems to be need of a national law upon this important subject. It is suggested that the farmers insist upon the

igid enforcement of the oleomargarine law, as there is good reason to elieve that some United States officials are careless in its enforcement, r in sympathy with the violators of this law.—*Master's Annual ddress.*

RESOLUTION ADOPTED.

Whereas no more important subject presents itself for consideration than the lulteration of drug and food products, and the extent of food adulteration is so eneral and so widespread in its evil effects, that it is costing the people millions of ollars every year; is demoralizing honest business, upsetting legitimate trade, and ivading the homes of America in every section, and its effects upon the health of the ation are such as to steadily undermine its life and strength: Therefore, be it

Resolved, That the National Grange, Patrons of Husbandry, in thirty-first annual ession assembled, hereby reaffirms its previous position on this subject, and demands f Congress the passage of laws to prevent the interstate traffic in adulterated and isbranded food and drug products.

Resolved, That the legislative committee of the National Grange, when appointed, s, and is hereby, directed to send petitions to every subordinate grange in the nited States, urging upon Congress the adoption of a pure food and drug law, to e signed and returned by them to Congress.

Resolved, That our national legislative committee be directed to present these resoitions to each Senator and Member of Congress and use every legitimate means to ecure the passage of remedial laws, and they are hereby authorized to cooperate ith other associations to secure a like end in such manner as may appear best to iem.

Resolutions similar in character to the above were also adopted by ie Association of Official Agricultural Chemists and the National 'armers' Congress at their last annual session and by many State ranges and other representative bodies.

BILLS IN BOTH SENATE AND HOUSE.

The above bill was also presented in the Senate by Hon. Charles J. 'aulkner, of West Virginia, as Senate No. 4144, and referred to the Sente Committee on Agriculture and Forestry. In the House it is H. R. 154, and was referred to the Committee on Interstate and Foreign ommerce, of which Hon. William P. Hepburn is chairman.

N. B. (G) in parentheses after name indicates appointment by governor f the State.

5TH CONGRESS, 2d Session. | SENATE. | DOCUMENT No. 234.

INTOXICATING LIQUORS, ETC., IN THE DISTRICT OF ALASKA.

LETTER

FROM

'HE SECRETARY OF THE TREASURY,

IN RESPONSE TO

ESOLUTION OF THE SENATE OF APRIL 1, 1898, RELATIVE TO THE ENFORCEMENT OF THE STATUTE PROHIBITING THE IMPORTATION, MANUFACTURE, AND SALE OF INTOXICATING LIQUORS, ETC., IN THE DISTRICT OF ALASKA.

PRIL 12, 1898.—Referred to the Committee on the Territories and ordered to be printed.

TREASURY DEPARTMENT,
OFFICE OF THE SECRETARY,
Washington, D. C, April 8, 1898.

SIR: I have the honor to acknowledge the receipt of Senate resolu-on dated the 1st instant, the text of which is as follows:

Resolved, That the Secretary of the Treasury is hereby directed to inform the ›nate whether section 14, chapter 53, Statutes at Large, volume 23, prohibiting ıe importation, manufacture, and sale of intoxicating liquors, etc., in the District ' Alaska, is being enforced, and if not, what means are necessary to provide for the ıll enforcement thereof.

Replying thereto, I have the honor to inform you that, under section 4, chapter 53, Statutes at Large, volume 23, the President issued reg-lations dated May 4, 1887, and March 12, 1892, which are now in force, ›pies of which are inclosed.

Under these regulations the introduction of intoxicating liquors into he Territory was prohibited except for medicinal, mechanical, sacra-ıental, or scientific purposes, and then only on a permit from the ›llector of customs for Alaska. They also prohibited the manufacture nd sale of such liquors in the Territory except for the purposes speci-ed, under a license to be issued by the governor of Alaska.

With regard to the regulations for the introduction of liquors into he Territory, it may be stated that every effort has been made by this)epartment and its officers to enforce the law. The collector of cus-›ms for Alaska has made numerous seizures of liquors illegally imported ıto the Territory and shipped the same to Portland, Oreg., for sale. 'he customs officers on the Pacific coast were instructed also to care-

tion of that section of the organic law which provides that "the importation, manufacture, and sale of intoxicating liquors in said district, except for mechanical, scientific, and medicinal purposes, is hereby prohibited, under the penalties which are provided in section 1955 of the Revised Statutes for the wrongful importation of distilled spirits. And the President of the United States shall make such regulations as are necessary to carry out the provisions of this section."

Even if there has been no lapse, negligence, or failure on the part of the officials charged with this great responsibility, yet it is a fact, that absolutely admits of no contradiction, that if there were no laws whatever on the statute books regarding the importation, manufacture, and sale of intoxicating spirits the traffic in Alaska could not possibly be more open and notorious. The remarkable spectacle is here presented of an undisguised contempt for the laws of this Government, and a parallel is not to be found elsewhere on this continent where the American flag floats as an emblem of authority. Why this anomalous condition of things should be found here, and here alone, may excite wonderment, but it is not difficult to demonstrate why this is so. A large proportion of the population of Alaska is composed of persons who scorn temperance legislation of any kind, and who especially believe that sumptuary laws are an invasion of reserved private rights. Furthermore, they persist in regarding the special-tax stamp of the Internal-Revenue Bureau, which is to be found in every saloon—totally unfounded as is that assumption—as a license issued by the Government for the protection of the business.

The situation is utterly incongruous, and it is scarcely surprising that no jury can be impaneled that will return a verdict against a violator of the law. The result is that there is practically no restriction of the traffic. In the city of Juneau, with a population of 3,000 or 4,000, there are said to be upward of forty saloons, and in Sitka, the seat of government, there are probably a dozen; and there are several breweries operated without a semblance of disguise. All attempts of Government officials to stamp them out have proved mere vanity and vexation of spirit. The seizure of a few bottles of liquor is smilingly submitted to, and after the departure of the officers the culprits come up cheerfully with a new supply, easily procured from some secret cache, and are ready for the next raid.

It would be strange if, under these conditions, the officers of the law did not become discouraged and vote the effort to do their duty in this regard a sheer waste of energy. So we see the result: A prohibition district where the unrestricted sale of intoxicants discounts any region that professes to confine the traffic within any sort of limits, and where the whole people are really put at a disadvantage on account of laws meant for their good. There can hardly be any exaggeration of the deplorable failure of the law, and I am free to say that I can not see how there can be any valid argument favoring its retention on the statute books without some new and successful means for its enforcement. It was originally adopted, no doubt, as a necessary protection of the natives of Alaska against the use of liquor, and this spirit might possibly well be applied to all people.

But it remains a fact that throughout the country general laws forbid the sale of intoxicants to the aborigines, and there is no apparent reason why these laws could not be made to cover the natives of Alaska, thus removing the necessity for the law affecting the entire population. Certainly, all interests would now be best subserved by the repeal of existing statutes and the adoption of a law similar to that in force in other regions where the Congress prescribes the conditions of this traffic. In the Territories and the District of Columbia there is no such situation as we find in Alaska, and the good government of the latter, in some notable respect the most promising portion of this great domain now under the direct control of the central Government, presents no adequate or logical justification for a system which was perhaps even originally based upon false premises, and which now offers no excuse for the continuation of a policy that manifestly can not be enforced.

During my tour through the district I talked with all sorts and conditions of men on this topic, and from the free-and-easy citizen who cares little for the moral aspect of the case to the missionary and the man devoted heart and soul to the uplifting of his kind, I think I may say that there was no exception to the opinion that "something must be done," and that there is scarcely any change conceivable that would not be an improvement upon existing conditions. The whole people are shocked and shamed by the report that in a "prohibition" community, where there were apprehensions that a food famine was imminent, whisky came in in undesired abundance, while bread was scarce. A consensus of the best opinion of Alaska I infer to be that the countenancing of the liquor traffic by the imposition of a license would be the best escape from what is now a maddening and intolerable situation, and which would be ludicrous did it not embody conditions which seriously reflect upon the majesty of a great Government.

From conversations with many persons in all walks of life it is my conclusion that a high license—say from $800 to $1,200—would come nearer to a proper and satisfactory adjustment of the vexed question than any other remedy available. It was

sale and delivery of such liquors made by or for me during the month embraced therein, and the true signature to every request received and granted; and such returns shall show all the intoxicating liquors sold or delivered to any and every person as returned."

Such applicant shall also file with his said application a bond to the governor of said Territory, in such penal sum as the governor shall prescribe, not less than five hundred dollars ($500), conditioned that for any violation of said act of May 17, 1884, or the regulations established by the President thereunder, said bond shall be forfeited. Such bond shall be signed by the applicant or applicants, as principal or principals, and by at least two sureties, who shall justify under oath in the sum of five hundred dollars ($500) each over and above all indebtedness and exemptions, and such bond shall be approved by and deposited with the governor. The United States and any person or persons who may be injured or damaged by reason of any violation of said law, or the regulations thereunder, may have an action upon such bond.

Upon taking said oath and filing said bond, the governor of said Territory may issue to the applicant a permit authorizing him to keep and sell intoxicating liquors as provided by said act and regulations made thereunder; and every permit so granted shall specify the building, giving the location thereof by street or number, in which intoxicating liquors may be sold by virtue of the same, and the length of time the same shall be in force, which in no case shall exceed twelve months.

3. The sale for medicinal purposes shall be made only upon the prescription of a reputable practicing physician of said Territory, stating the kind and quantity of liquor necessary to be used by the patient.

4. The sale for mechanical and scientific purposes shall be made only upon application duly subscribed and sworn to by the applicant in person, before some person authorized to administer oaths, made by the party desiring to use the same, stating the kind and quantity of liquor required, and that the same is necessary for mechanical or scientific purposes (stating particularly the purpose and the exact locality where to be used).

5. No licensed person shall sell or deliver any intoxicating liquors to any person if he has reason to believe that the applications, certificates, or affidavits submitted to him by applicants are evasive or untrue; or to any minor or intoxicated person, or to one addicted to intoxication. If the applicant is not personally known to the person selling, before filling his request he shall require identification by a person known to him, and a statement signed by such witness that the applicant is not a minor and is not in the habit of using intoxicating liquors to excess, and is worthy of credit as to the truthfulness of the statements in his application.

6. At the end of each month each licensed person shall make out and forward to the governor an itemized report of the date and quantity sold to each person, and the purpose for which it was bought; and if, upon a prescription, the name of the physician giving the same, which report shall be sworn to.

7. Any person violating these regulations, or the provisions of law relative to the sale of distilled spirits or intoxicating liquors in Alaska, shall be liable upon conviction in the proper tribunal to the penalties imposed in section 1955 of the Revised Statutes of the United States, and in any event upon such violation by such person his permit shall be revoked and not renewed without approval of the Secretary of the Interior.

8. In case any physician makes a false certificate as to matters aforesaid, any certificate of his thereafter shall be rejected and no application shall be granted thereon; and in any case when a false affidavit is made, all applications by such person thereafter shall be rejected. Copartnerships, corporations, and all associations are included within the foregoing rules.

9. The governor shall have power to suspend or revoke any permit issued by him to any person whenever, in his judgment, it is shown, after due notice, that such person has failed to comply with the rules and regulations prescribed herein, or that the best interests of the inhabitants of the Territory require such suspension or revocation of the permit.

10. Every person who, under these regulations, shall have obtained a special permit from the governor of the Territory of Alaska to sell intoxicating liquors for medicinal, mechanical, and scientific purposes will also be required to pay to the collector of internal revenue of the district of Oregon (in which collection district the Territory of Alaska is included) the special tax as a liquor dealer, and in all other respects to comply with the internal-revenue laws.

O. L. SPAULDING,
Acting Secretary.

EXECUTIVE MANSION, *March 11, 1892.*

Approved.
BENJ. HARRISON.

55TH CONGRESS, 2d Session. } SENATE. { DOCUMENT No. 235.

NAVAL HOSPITAL, MARE ISLAND, CAL.

LETTER

FROM

THE SECRETARY OF THE TREASURY,

TRANSMITTING

COPY OF A COMMUNICATION FROM THE SECRETARY OF THE NAVY, SUBMITTING AN ESTIMATE OF APPROPRIATION FOR THE NAVAL HOSPITAL, MARE ISLAND, CAL., RECENTLY DESTROYED BY EARTHQUAKE.

APRIL 14, 1898.—Referred to the Committee on Appropriations and ordered to be printed.

TREASURY DEPARTMENT,
OFFICE OF THE SECRETARY,
Washington, D. C., April 13, 1898.

SIR: I have the honor to transmit herewith, for the consideration of Congress, copy of a communication from the Secretary of the Navy of the 12th instant, submitting an estimate of appropriation, $100,000, for the naval hospital, Mare Island, Cal., recently destroyed by the earthquake of March 30, 1898.

Respectfully, yours,

L. J. GAGE,
Secretary.

The PRESIDENT OF THE SENATE.

NAVY DEPARTMENT,
Washington, April 12, 1898.

SIR: I have the honor to inclose herewith, for transmission to Congress, to be included in the naval appropriation bill now pending in the Senate, an estimate of an appropriation, amounting to $100,000, to be immediately available, for tearing down and removing the present naval hospital building and appendages recently destroyed by earthquake at the navy-yard, Mare Island, Cal., and erecting a new naval hospital and appendages at that place. In this connection I also inclose copy of a letter of the Surgeon-General of the Navy, dated

the 11th instant, with inclosures, setting forth the necessity of this appropriation.

I have the honor to request that this matter may be expedited.

I have the honor to be, sir, very respectfully,

JOHN D. LONG, *Secretary.*

The SECRETARY OF THE TREASURY.

NAVY DEPARTMENT,
Washington, D. C., April 11, 1898.

SIR: I have the honor to request that an appropriation of $100,000 may be asked for, to be included in the naval appropriation bill now pending, for tearing down and removing present naval hospital building and appendages recently destroyed by earthquake at navy-yard, Mare Island, Cal., and erecting a new naval hospital and appendages at that place, the appropriation to be immediately available.

The original cost of the present hospital was $127,000. It accommodates 90 patients and has been filled to its utmost capacity. It is proposed to erect in its stead a wooden building of about the same capacity, with improvements in construction and adaptation in accordance with modern hospital requirements.

The estimate submitted has been prepared by the Chief of the Bureau of Yards and Docks at the request of this Bureau.

A copy of the correspondence between the Bureau and the commandant, navy-yard, Mare Island, is transmitted herewith.

I am informed by the colonel commandant of the Marine Corps that the patients from the hospital have been temporarily transferred to the marine barracks.

Very respectfully,

W. K. VAN REYPEN,
Surgeon-General, United States Navy.

The SECRETARY OF THE NAVY.

[Telegrams.]

MARE ISLAND, CAL., *March 31, 1898.*

The SURGEON-GENERAL, *Navy Department:*

Hospital building seriously damaged by earthquake last night. Survey ordered. Request authority to make some immediate repairs for safety.

GLASS, *Commanding.*

WASHINGTON, D. C., *March 31, 1898.*

To MARE ISLAND, CAL.:

Repairs essential to immediate safety authorized.

VAN REYPEN.

WASHINGTON, D. C., *April 4, 1898.*

To MARE ISLAND, CAL.:

Forward by telegraph to Bureau as soon as possible estimated cost to permanently repair property under Bureau of Medicine and Surgery damaged by earthquake.

VAN REYPEN.

WASHINGTON, D. C., *April 7, 1898.*

To MARE ISLAND, CAL.:

Telegraph immediately rough estimate of cost to permanently repair property under Bureau of Medicine and Surgery damaged by earthquake.

VAN REYPEN.

MARE ISLAND, CAL., *April 7, 1898.*

SURGEON-GENERAL, *Washington, D. C.:*

Board of survey, with assistance of Government superintendent of construction, San Francisco, will finish examination to-morrow. Hospital building probably be condemned; better ask for enough money to build steel-framed hospital.

KIRKLAND, *Commandant.*

MARE ISLAND, CAL., *April 8, 1898.*

SURGEON-GENERAL, *Navy Department:*

Board of survey recommends condemnation of hospital building. Estimates can be based only on plans adopted by Bureau.

KIRKLAND, *Commandant.*

WASHINGTON, D. C., *April 9, 1898.*

NAVY-YARD, *Mare Island, Cal.:*

Will hospital building be safe for inmates when present repairs are completed?

VAN REYPEN.

MARE ISLAND, CAL., *April 9, 1898.*

SURGEON-GENERAL, *Navy Department:*

No repairs are being made. All work done has been tearing down chimneys and plaster likely to fall immediately. In case repairs were attempted, the building must be unoccupied.

KIRKLAND, *Commandant.*

Estimates of appropriations required for the service of the fiscal year ending June 30, 1899, by the Bureau of Medicine and Surgery, Navy Department.

Naval hospital, Mare Island, Cal.:

For tearing down and removing present naval hospital building and appendages recently destroyed by earthquake at navy-yard, Mare Island, Cal., and erecting a new naval hospital and appendages at that place, to be immediately available (submitted)..... $100,000

O

55TH CONGRESS, 2d Session. | SENATE. | DOCUMENT No. 236.

WILKINSON CALL.

MARCH 7, 1898.—Referred to the Committee on Privileges and Elections.

APRIL 14, 1898.—Ordered to be printed.

Mr. CHANDLER, from the Committee on Privileges and Elections, reported the following

MEMORIAL OF WILKINSON CALL, FOR EIGHTEEN YEARS A SENATOR OF THE UNITED STATES FROM THE STATE OF FLORIDA, AND OF SOME MEMBERS OF THE FLORIDA LEGISLATURE, RELATING TO THE ELECTION OF SENATOR FOR THE TERM COMMENCING MARCH 4, 1897.

To the President of the Senate of the United States:

Your memorialist respectfully states that he was for eighteen years a Senator of the United States from the State of Florida.

That he is now a private citizen of the State of Florida.

That he was a candidate for the office of United States Senator for the term commencing on the 4th of March, 1897.

He presents to the Senate the following statement of facts, signed by Mr. E. A. Wilson, of St. John County; Mr. Moses W. Linton, of Madison County, and by Mr. Bowen Shepard, of Liberty County, Fla., members of the legislature, for themselves and others.

He states that the members of the legislature of Florida whose names are signed to this memorial are honest, truthful, and incorruptible men and worthy citizens of the State of Florida.

He avers that the statements of this memorial are true.

That he is himself a witness as to the truth of many of them and as to the facts that constitute the circumstantial evidence which conclusively proves the truth of others.

He avers that the truth of the statements made in this memorial of the members of the legislature, hereto attached, is within the knowledge of many members of the legislature and of other persons, and can be proven.

Your memorialist presents this petition to the Senate to the end that an investigation shall be made by a committee of the Senate as to their truth, and such legislation be enacted as will prevent persons and corporations, nonresidents of the States, not subject to the jurisdiction of its laws, but engaged in the interstate commerce, from interfering with elections or nominations for Senators of the United States and Members of Congress and members of the legislatures of the States, and from using money to influence such elections, and that it be referred to a committee of the Senate to report on the same.

It is only fair to state that he should add to this statement that no charges are intended to be made in this memorial against the president of the Florida Central Peninsula Railroad Company, Mr. Duval, or the owners of that corporation. It is believed that the president and owners of this corporation had no connection with the corrupt and criminal acts connected with the Senatorial contest of 1897.

Your memorialist makes no charges in this memorial against any particular person, but avers that the facts are truthfully stated, and prays for a committee of investigation, that such laws may be enacted as will aid the States in preventing this great public evil.

WILKINSON CALL.

MEMORIAL TO THE SENATE OF THE UNITED STATES.

To the President of the Senate of the United States:

The undersigned members of the house of representatives of the State of Florida, present and voting in the joint assembly for the election of a Senator of the United States from Florida, on the 3d day of April, 1897, respectfully state:

That on the first Monday in April, 1897, the members of the legislature of the State of Florida, convened at Tallahassee, the capital, and became organized as a senate and house of representatives in pursuance of law.

That on the second Tuesday in April, in conformity with the statute of the United States, the two houses balloted for a Senator of the United States from the State of Florida, for the term of six years, commencing on the 4th day of March, 1897. On the succeeding day, no person having been chosen, they went into joint convention and balloted, and continuously thereafter until the 14th day of May succeeding.

That Wilkinson Call, of Duval County, and William D. Chipley, of Escambia County, were the principal candidates voted for.

That the counties of Jackson, Liberty, Gadsden, Wakulla, Jefferson, Hamilton, Suwannee, Lafayette, Madison, Columbia, Baker, Nassau, Duval, Clay, Putnam, Bradford, Alachua, Levy, Marion, Sumter, Brevard, St. Johns, Monroe, De Soto, Manatee, Hillsboro, Hernando, Citrus, and Pasco chose 60 members out of the 100, which comprised the two houses, to vote for Wilkinson Call, and in some form of expression of public opinion so instructed and pledged them.

That previous to the meeting of said legislature agents and representatives of certain persons had been sent through the State to distribute free pass books and purchase with money the votes of such members as could be bought to vote against the said Call, and defeat the will of the people for his election.

That upon the assembling of the legislature persons, some of them of bad character, from all parts of the State were brought to Tallahassee to influence votes against the election of said Call.

That money was lavishly supplied to purchase the votes of members.

That free hotels, free barrooms, and free gambling houses were furnished to those who would vote against said Call.

That bribery, fraud, prostitution, and vice in every form were made use of. Women were employed to entice members away from the place of voting when they would not vote against the said Call; others, to poison them with drugs and keep them in that condition, and thus prevent their voting. One good, honorable, and courageous member,

who was loyal to his people and his promises, was drugged into unconsciousness and a woman of a disreputable house hired to keep him in that condition, and he finally died from the effects of the poison thus administered to him.

That not less than $100,000, in the opinion of your memorialists, was expended for this purpose.

That the principal newspapers of the State were either owned or controlled by the persons furnishing the money for the criminal purposes herein related.

Your memorialists state that a scene of such revolting wickedness has rarely been exhibited in any part of the United States. We think it our duty to present this statement of facts to the Senate and the people of the United States, that such laws may be enacted and such measures adopted as will prevent a recurrence of these crimes and aid the State in bringing the perpetrators to punishment without interfering with the powers and prerogatives of the States.

Your memorialists charge that there is and has been a conspiracy on the part of a few men, nonresidents of the State, but owning great properties and franchises therein, to overthrow the State government, impose taxes on the people, and control and use all of its powers for their own purposes and benefit, by bribery, fraud, and corrupt practices of every kind.

Your memorialists arraign the persons who furnished the money to purchase the commission of these crimes, and charge that with their knowledge and approval their employees and agents were the direct accomplices and means by which they were carried into effect.

Your memorialists respectfully state that the privileges and franchises granted to these persons to engage in the interstate commerce of the United States, should not be permitted to be used to overthrow a State government, to corrupt the public offices, and to degrade the public morals. They arraign these persons as guilty of these high crimes before the bar of your honorable body, and as citizens demand the protection of the just exercise of your powers.

Your memorialists further state that while these persons have brought themselves within the letter and spirit of the punitive provisions of the State laws, their great wealth enables them to defy its provisions and shield their instruments by corrupting the administration of the laws and impeding the course of judicial procedure, and besides they reside in other States and out of the jurisdiction of the State.

Your memorialists represent a people who are conservative and who do not favor interfering with the just rights of corporations or the individuals who compose them, nor the rights and privileges of the men who have accumulated wealth by the promotion of public enterprises of importance, but they demand that they shall not use the franchises granted to them in trust for public purposes to pollute the public and private morals, degrade the manhood and insult the purity and womanhood of our people. All this they have done and are still doing, and have closed the newspapers against its exposure. The only daily newspapers in the State of general circulation are owned or controlled by the men who furnished the money for the purposes herein stated. They control the Associated Press dispatches, and their newspapers are furnished free to all persons in times of election. They reduce the cost of advertising below a compensating point; and their power of preventing the sale and speedy transportation on their trains effectually prohibits the existence of any other newspaper of general circulation.

They follow into private life and blacklist the public servant or private individual who refuses to become their slave or who incurs the ill-will of their employees, and destroy him by defeating his efforts to earn an honest support for his family and himself.

Your memorialists are loth to place this statement on record, but the truth demands that it should be made known. The franchises owned by the men guilty of these crimes against the civilization of the age were granted by the bounty of the people of Florida, and they have been able to obtain by improper means the ownership of the vast public domain of the United States in Florida, which was solemnly dedicated by law to be the free homes of the people, and impose taxes on those whose labor and hard toil makes them productive. In return for this bounty they have inaugurated a saturnalia of crime, pollution, and vice that parallels the crimes of the dark ages, by the introduction of poison and secret murder as their method of gaining power.

It would seem as if it were impossible that these statements could be true, but your memorialists aver that they are known to many persons and are capable of proof, and they challenge the perpetrators to come before the bar of public opinion and a searching investigation and trial.

The influence of money is insidious. It chooses for its instrument the person least suspected and who stands nearest the victim; the friend of the people most sincere in protestations of fidelity, and the public servant most earnest in his declarations of zeal in their behalf. This condition emphasizes the danger to the people's Government and to the security of our homes and families from the use of the great accumulations of wealth in a few persons to influence and control the election of public officers.

Your memorialists appeal to you for such aid as will prevent a few men owning franchises of taxation from using them to overthrow the Government and deprive the people of their right. They further state that the persons before referred to have been appealed to by both Democrats and Republicans and Populists of eminence to abstain from these practices and confine themselves to the duties for which their franchises were granted, and to withdraw from the ownership and control of newspapers and from contributions of their money for corrupt and criminal purposes, so that the great political parties may wage their contentions in fair discussion before the people, and thus receive an honest expression of public opinion; but they have refused to do so, and are now engaged, through their agents and employees, in organizing themselves for the control of the election of a Senator and Member of Congress in the year 1898.

Your memorialists further state that this is not a question of politics or party success. The persons charged with these crimes profess to be Republicans, but make use of persons claiming to be Democrats for the purpose of controlling the Democratic party organization in Florida and selecting the candidates for office who will serve their purposes, and defeating those who are loyal to the people and their duty and beyond the reach of corruption. This is proved by the last Senatorial election, when, although the people chose 98 Democrats to the legislature composed of 100 members, with more than a majority instructed and pledged to vote for the election of Wilkinson Call, and with the fact well known that the people of the State, whether Democrats, Republicans, or Populists, were almost unanimous for his election, yet, when the legislature assembled, they were able, through the influence of their newspapers, free transportation, free barrooms, free gambling houses, women of bad

repute, open bribery and corruption, to influence numbers of the members chosen to vote for him to vote either against him or for some person favorable to their interests and designated by them, and, finally, to obtain the cooperation of some of the persons claiming to be his chief supporters.

Your memorialists submit that it is within the power of Congress to enact such laws as will forbid, under the pain of severe punishment, persons engaged in the interstate commerce from attempting to influence or control the elections of a State. To the end that such laws may be enacted and that the people of the United States may know who are guilty and who innocent of these crimes, and the truth or falsehood of these statements be obtained, your memorialists pray that a committee of the Senate or Congress shall be appointed to investigate and report on the truth of the statements herein made; and, further, to report such legislation as will be an adequate remedy against a public evil which, if unabated, will ultimately destroy the Republic and the liberties of the people with it, and presently degrade the character of its great tribunals—legislative, judicial, and executive.

BOWEN SHEPARD,
Member of the House.

I was a member of the house of representatives of the legislature of Florida of 1897, and present at the election of a Senator of the United States.

It is within my knowledge that bribery, prostitution, and free saloons were used to defeat the election of Wilkinson Call. The barrooms were free to his opponents. An open gambling room was maintained. Persons who were known to be there for the purpose of buying members to vote against Mr. Call were brought from different parts of the State, and it was known to everyone that money would be paid to persons to vote either directly or indirectly against him. Women of disreputable pursuits were engaged in soliciting votes against him.

M. L. LINTON,
Member of House from Madison County.

I was a member of the house of representatives of the legislature of Florida of 1897, and present at the election of a Senator of the United States.

It is within my knowledge that bribery, prostitution, and free saloons were used to defeat the election of Wilkinson Call. The barrooms were free to his opponents. An open gambling room was maintained. Persons who were known to be there for the purpose of buying members to vote against Mr. Call were brought from different parts of the State, and it was known to everyone that money would be paid to persons either to vote directly or indirectly against him. Women of disreputable pursuits were engaged in soliciting votes against him.

E. A. WILSON.

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